Grand Canyon Trust - Southern Utah Wilderness Alliance - The Wilderness Society - Western Watersheds Project - National Parks Conservation Association - Center for Biological Diversity - Project Eleven Hundred - Western Resource Advocates - Conservation Lands Foundation - WildEarth Guardians - Coalition to Protect America's Parks - Sierra Club

Grand Staircase-Escalante National Monument
Draft Resource Management Plan and EIS Comments

Table of Contents

Introduction

These comments are submitted on behalf of Grand Canyon Trust, Southern Utah Wilderness Alliance, The Wilderness Society, Western Watersheds Project, National Parks Conservation Association, Center for Biological Diversity, Project Eleven Hundred, Western Resource Advocates, Conservation Lands Foundation, WildEarth Guardians, Coalition to Protect America's Parks, and the Sierra Club. We appreciate the opportunity to provide input for the Grand Staircase-Escalante National Monument Resource Management Plan.

We applaud the BLM for the significant work put forth in development of the Draft Monument Management Plan and Environmental Impact statement ("DEIS" or "Draft RMP"). We believe that in many regards the preferred alternative, Alternative C, presents an appropriate management framework that adequately protects Monument objects while still providing for a wide range of discretionary uses. However, there are areas where Alternative C fails to adequately protect Monument objects or inappropriately prioritizes conflicting uses in a unit of the National Conservation Landscape System. In these instances we have proposed elements from other alternatives to adopt, modifications to the existing alternatives, or additional alternative elements to adopt in order to properly protect Monument objects. To assist the BLM in most efficiently and effectively responding to our comments, we have written comments specifically in response to the rows in the Alternatives Comparison matrix on pages 2-17 - 2-131 of Volume I of the Draft RMP and EIS. We refer to other places in the Draft RMP and EIS as appropriate. In addition, at the beginning of each plan category, we have provided a summary of plan components that protect Monument objects, need work, and areas where Monument objects are not protected.

Proclamation 10286

In accordance with Proclamation 10286, BLM must manage the Monument for the protection and preservation of its historic, prehistoric, and scientific values, and only allow uses other than those needed for protection of Monument objects when those uses do not conflict with the

directives of the Proclamation. "The Secretary of the Interior (Secretary) shall manage the Monument through the Bureau of Land Management (BLM), as a unit of the National Landscape Conservation System, and in accordance with the terms, conditions, and management direction provided by this proclamation." Proclamation No. 10286. Accordingly, the standard approach of multiple-use management does not apply, and any effort to adopt such a management approach to the detriment of the Monument's natural, cultural, historic, and scientific values violates the Proclamation.

The Antiquities Act mandates prioritizing the protection of Monument objects and values over discretionary uses, such as rights-of-way development and vegetation management. Monument proclamations have the force of law and the relevant agencies must manage these lands for the protection of Monument objects. In regard to the Upper Missouri River Breaks National Monument in Montana, the U.S. Ninth Circuit Court of Appeals found "[t]he national monument designation changed the status quo for the Upper Missouri River Breaks area, elevating protection of the 'biological, geological, and historical objects of interest.'" *Montana Wilderness Association v. Connell*, 725 F.3d 988, 1011 (9th Cir. 2013). In another case involving the Upper Missouri River Breaks National Monument, the Ninth Circuit held that "[t]he Proclamation changed the legal landscape [for the Monument] and BLM must consider this change in determining the reasonable range of alternatives that should be carefully analyzed… BLM must consider both the terms of the Proclamation and the objects of the Proclamation to be preserved before taking actions that can affect Monument objects." *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1053 (9th Cir. 2013).

National Landscape Conservation System

The Monument is also part of the National Landscape Conservation System (NLCS), which was established by Congress in the Omnibus Public Land Management Act of 2009. 16 U.S.C. § 7202(b). Proclamation 10286 specifically provides that the Monument is to be managed as a unit of the National Landscape Conservation System. The NLCS was established "to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations." 16 U.S.C. § 7202. BLM's guidance documents reaffirm that BLM shall manage the components of the NLCS to protect the values for which they were designated, including, where appropriate, prohibiting uses that are in conflict with those values. BLM Manual 6100, National Landscape Conservation System Management Manual; BLM Manual 6220, National Monuments, National Conservation Areas, and Similar Designations Manual.

Any activity within the Monument needs to be designed to ensure that Monument objects are not harmed, degraded, or impaired by such activity. In developing alternatives BLM must assess

if activities that would be permitted under the alternative would harm Monument objects. The National Monuments, National Conservation Areas, and Similar Designations Compatibility Analysis Framework provides a framework to assess uses within monuments and determine if a use is compatible with providing protection of the monument values and objects. Such analysis should be incorporated into the NEPA analysis concerning management decisions for the Monument, and discretionary uses (uses not required by law) should only be allowed if compatible. "Through the NEPA process, the manager with decision-making authority for a Monument or NCA will evaluate discretionary uses and will analyze whether the impacts of the proposed use in the Monument or NCA or similarly designated area are consistent with the protection of the area's objects and values." BLM Manual 6220, National Monuments, National Conservation Areas, and Similar Designations.

Management Areas

We are heartened to see that BLM is proposing to return to a "Management Area" (aka "zoned management") approach in its preferred Alternative C in the DEIS. These broadly-defined landscapes set the framework for the types of uses and experiences that BLM plans to manage for in specific areas, and allows other future implementation-level management decisions to have a certain level of stability and predictability based on the zone. We believe the Monument management plan will benefit greatly if BLM carries this component of Alternative C forward into the final plan.

However, BLM should make clear in the final plan/ FEIS its reasoning for the specific geographic location of each management area, and what information and data influenced the agency's specific GIS polygons for management areas in Alternative C. Right now, because this management area approach only occurs in Alternative C, there is only one GIS layer showing only one option for where the Frontcountry, Passage, Outback, and Primitive zones would occur on the Monument. Because there are no alternative Management Area maps or GIS, we strongly encourage the BLM to provide clear explanations in the FEIS about how these polygons were selected and how the agency determined which management area status would apply in which specific locations.

Although some of this reasoning seems apparent (for example, WSAs were mostly included as "Primitive," and the most frequented motorized travel routes within the Monument are in the "Passage" zone), some is confusing or seemingly inconsistent. For example, why doesn't the "Primitive" area boundary follow WSA boundaries exactly, where they overlap? There are several thousand acres in BLM's existing GIS and mapping where portions of WSAs fall within the "Outback, "Passage," or even "Frontcountry" management areas, despite management guidance for those areas often falling well short of BLM's nonimpairment standards for WSA management. BLM must address these discrepancies in the FEIS, especially because the

management areas shown in Alternative C, Appendix A, Figure 2-1 are similar to those used in the 2000 Monument Management Plan, but they are not identical, and there appears to be roughly 88,000 acres less "Primitive" area in the current preferred alternative in the DEIS than in the 2000 MMP. 2000 MMP at 9, compare to DEIS at 2-2, Table 2-1.

Considering that these management area determinations will guide the vast majority of specific future resource management decisions in the preferred alternative, BLM must demonstrate that it actually mapped these areas logically, consistently, and with a focus on manageability and protection of Monument objects.

Resource-Specific Comments

Soil Resources

Protects Monument Objects:

- The objective to "protect and restore soil health, productivity and stability, and infiltration to prevent erosion from disturbance and to provide for optimal plant growth and site potential."
- Harvesting biocrust prior to surface disturbance and researching restoration techniques are examples of the science-based management and innovation for which GSENM was designated.

Needs work:

- The soil health indicators used to evaluate if a site is meeting BLM Utah Rangeland Health Standards include ground cover and vegetation. *Native* vegetation communities and *naturally occurring* types of ground cover are the most protective of soil health in the long term, and need to be specified.
- The term "desired vegetation" needs to specify *native* species.
- The BLM Analysis of Management Situation (AMS), released in July 2015 is an outline of resource concerns to be addressed in the upcoming Environmental Impact Statement (EIS) analysis of grazing amendment alternatives. The AMS, in addition to citing the importance of biocrusts in managing healthy desert ecosystems on the Monument, notes that, "Comparisons of observed crust distribution with potential distribution can serve as a surrogate for reference condition" (BLM 2015).
- The management direction to develop a soil mitigation and restoration plan prior to surface disturbing actions. This is a great start; however, this management direction should emphasize that soil-disturbing discretionary actions will be strictly limited to those activities expected to result in soil and biocrust improvement. Additionally, the soil mitigation and restoration plan should be made available for public input.

Areas where Monument objects are not protected:

- More specific direction for protection of biocrusts from livestock grazing should be incorporated into the final EIS. The DEIS at Row 22 says AMPs would adequately manage impacts on biocrusts and soils; however, biocrust is fundamentally incompatible with surface disturbance, so we question the effectiveness of this mitigation measure. Further, the DEIS uses Concostrina-Zubiri et al. (2014) to support its conclusion that, since grazing favors disturbance-resistant biocrust species, it could also increase biocrust recovery rates. (DEIS at 3-35). This mischaracterizes the research, and this error should be removed from the FEIS.

  In fact, Concostrina-Zubiri et al. found that grazing disturbance not only reduced biodiversity and altered the species composition in biocrust communities, but it altered them permanently. *Removing grazing did not restore the previous biocrust community*. The Proclamation requires GSENM to preserve stable ecosystem functions, which includes maintaining the species composition of unimpacted biocrust. Tinkering with the species composition of biocrust to engineer a higher resistance to discretionary uses is not within the purview of the BLM. As the final sentence of Concostrina-Zubiri et al. concludes:

  "Because of the high possibility of state changes with grazing disturbance and the uncertainty surrounding the true impact of such a change, as well as our limited ability to restore the original communities, it is of critical importance that management goals in these landscapes include preservation of the BSC communities."

- The Final EIS should incorporate adaptive management in regards to soil resources, and contain more detailed plans for soil monitoring and triggers for mandatory actions as well as consequences for failure to meet objectives.
- Vegetation treatments, especially mechanical techniques, cause damage to soils and biocrusts. The DEIS says that biocrusts improve once a project has recovered, but provides no scientific support for this contention. This analysis runs contrary to all of the scientific research and literature we are aware of. However, there is ample evidence for the negative effects of these projects.

Alternatives Comparison

Row 12

Adopt language from Alternatives B and C. Include the word "enhance" from Alternative D.

Row 12 Rationale

Page 3-31 of the draft RMP/EIS recognizes that the majority of the decision area "currently exhibits degraded soil health"; thus, simply "maintaining" soil health as called for in Alternative C may result in the continuation of degraded conditions. Degraded soil health is not consistent with proper management of the "diverse and unusual soils" listed as Monument objects in the

Proclamation. Considering the lack of historical data on soil conditions within the Monument, limiting the language to "restore" may limit the Monument's ecological potential as "restoration" efforts could be misinformed and inadequate. In addition, the FEIS should clarify that "restoring" biocrust includes late stage crust with all components (mosses and lichens as well as cyanobacteria). The BLM prepared an Analysis of Management Situation (AMS) in 2015 in preparation for a grazing amendment to the 2000 Monument Management Plan. That document, in addition to citing the importance of biocrusts in managing healthy desert ecosystems on the Monument, notes that, "Comparisons of observed crust distribution with potential distribution can serve as a surrogate for reference condition" (BLM 2015). Given that Page 3-30 of the DEIS mentions "the entire decision area exhibiting the potential for biological soil crusts," the goal of "enhancement" from Alternative D should be included in the final plan.

Row 13

Include the language from all alternatives with the following modification:

"improve, restore, and/or *maintain.*"

Row 13 Rationale

In row 13, the object of all alternatives is to "maintain, improve, and/or restore overall watershed health." The location of the word "maintain" is important here. It would be more appropriate to say "improve, restore, and/or maintain" to indicate that conditions would be restored to good health and then maintained rather than simply preventing further degradation of watershed health. Emphasis must be made on improving and restoring degraded waterways, rather than simply "maintaining" them as they are. Grazing is a significant contributing factor to streambank erosion and stream sedimentation. If grazing continues after restoration efforts have been made in an area, the word "maintain" becomes important as conditions will likely degrade due to domestic grazing pressures. Data gathered during 2023 post-grazing surveys conducted in GSENM riparian corridors demonstrate the serious impacts cattle inflict on the Monuments watershed soil resources. See the "Deer Creek Allotment Condition Assessment" and the "Hackberry Canyon Condition Assessment" in Appendix A.

Row 14

We support Alternatives B-D , with the following modifications recognizing that current Rangeland Health assessments are inadequate to assess Monument objects (Modifications in italics):

> "Protect and restore upland soils to meet the *revised* BLM Utah Rangeland Health Standards (Standard 1) *as indicated by naturally occurring ground cover and the appropriate amount, type, and distribution of native vegetation."*

As part of this Monument's science program, review, validate, and revise rangeland health assessment methods to adequately protect Monument objects.

Row 14 Rationale

We support the goal to tie soil management to revised methods to assess Utah Standards for Rangeland Health, but we would like more clarification on some points. Where the Standards call for upland soils to exhibit permeability and infiltration rates as indicated by cover and litter sufficient to protect the soil, the DEIS should specify that this means naturally occurring ground cover such as native vegetation, biocrust, litter, and rock. Litter from masticated trees and shrubs can protect soils from erosion, but it often forms a layer far deeper than normal. This can smother biocrust, which is a critical component of ground cover, and therefore cannot be considered an adequate method for meeting Standard 1. (see more in Row 47 rationale on problems with current Rangeland Health assessment methods)

Under c) 1., the Desired Plant Community should be defined as native plant species and functional groups as described by the Ecological Site Description (except where short-lived non-natives are needed to stabilize actively-eroding soils after a disturbance such as fire or flooding).

Row 15 and all rows thereafter

Please explain how "Protect and restore," the language used in Alternatives B and C, differs from "Protect, maintain, enhance, and/or restore," which is often seen in Alternative D.

Row 19

We prefer Alternatives B/C, but would prioritize conducting assessments in allotments that are not meeting rangeland health standards regardless of the watershed they fall within. Add the following language:

- "Rangeland health assessments, causal factor determinations, and appropriate actions taken will be made publicly available."

Row 19 Rationale

There are twelve allotments that did not meet rangeland health standards that fall outside the priority watersheds: The east part of Coyote, Ford Well, Fortymile Ridge, Headwaters, Lake, Last Chance, Lower Cattle, Nipple Bench, Rock Creek-Mudholes, School Section, Soda, and Swallow Park. Under Alternatives B/C, these would not be assessed for land health in the next two years.

The preferred alternative makes Lake (Navajo Point pasture), Lower Warm Creek, Soda, Rock Creek-Mudholes (Grand Bench pasture), and Fortymile Ridge unavailable to grazing. That leaves the remaining ten allotments at a lower priority for assessment: The pastures in Lake and Rock

Creek-Mudholes on GSENM, Coyote, Ford Well, Headwaters, Last Chance, Lower Cattle, Nipple Bench (not meeting but not because of cattle), School Section, and Swallow Park. These should be prioritized also. Lake and Rock Creek-Mudholes are particularly important to monitor because they are difficult to access and previous rangeland health assessments have shown severe resource impacts over the years from feral cattle, especially around water sources. Photos from 2015 have documented degraded riparian areas in the Lake allotment (Photos A, B, and C in Appendix A.) These allotments should therefore be at the top of the list of priorities.

The DEIS says that progress has been made in the six allotments that did not meet Standard 1 of the Utah Standards for Rangeland Health due to livestock grazing (Circle Cliffs, Coyote, Mollies Nipple, Soda, Upper Paria, and Vermilion). DEIS at 3-30. BLM claims that these areas are "making progress" toward meeting Standards. *Id.* However, that assertion was based on riparian assessments that indicated improvement, not on the upland assessment sites that failed Standard 1. As the DEIS acknowledges on pages 5-30 to 5-35, Table 5-14 of the 2022 Analysis of the Management Situation, some of these sites are still not meeting Standard 1 almost two decades after the determinations were made. Further, surveys completed by the Grand Canyon Trust in April and by the Center for Biological Diversity last month both found degraded riparian and other resources in the Mollies Nipple allotment, new information that any subsequent NEPA analysis on the allotment and this management plan must address. See Appendix A and Appendix C attached.

To sum up, we concur with GSENM's preferred alternative to conduct land health assessments on GSENM recognizing that the current assessment methods should be revised to adequately assess and to ensure protection of Monument objects. Grazing permits (and other grazing authorizations, including annual operating instructions) on GSENM have frequently been issued or renewed without NEPA analysis, and such analysis will help GSENM get back on schedule and into compliance with the Antiquities Act. We agree with the plan to prioritize land health assessments in the next two years on allotments in watersheds that have departed from AIM benchmarks.[1] However, *all* allotments that are failing rangeland health should be assessed as soon as possible. Those with the lowest health assessments or other resource issues should be considered first regardless of the watershed.

[1] Note that the AIMS evaluations assess watershed ecological conditions. While this approach may be valuable to understand the impact to critical habitat, water, wildlife, and riparian values the Monument protects, it does not address archeological, recreational, scenic, tribal, or other values identified by the Monument proclamation, and not all of these latter values derive directly from ecological values. Therefore, the AIMS evaluations do not assess livestock grazing's impacts to, or to understand whether grazing is impacting protection of, all Monument objects.

Row 21

Alt D is preferred with the following modification:

> "Prohibit soil-disturbing discretionary actions *on erosive soils* and slopes greater than 30 percent." [*Emphasis* added to modification]

Row 21 Rationale

Many soils throughout the monument are susceptible to erosion, as the DEIS describes (pp 3-29 - 3-30). Considering that Proclamation 10286 designates the monument's "unusual and diverse soils" as Monument objects to be protected, the agency should consider the requested stipulation.

Row 22

Alt D is preferred, although exceptions should be made only for land health restoration actions that *do not require surface disturbance* (i.e., manual methods only).

In order that "Livestock grazing is managed through allotment management plans, which consider the protection, maintenance, enhancement, and restoration of soil resources," new AMPs will need to be created using revised AMP requirements that specifically address and ensure the protection Monument objects, as required by the Monument proclamation and the Antiquities Act.

Row 22 Rationale

All alternatives say that impacts on biocrusts and soils from livestock grazing would be minimized through the AMPs. However, we question the effectiveness of this mitigation measure, particularly given that Alternative A involves nearly twice the intensity of livestock grazing as Alternative D. BLM must provide science-based data to support its conclusion. Surface disturbance, including livestock grazing, is fundamentally incompatible with the protection, maintenance, enhancement, and restoration of soil resources. Allotment Management Plans (AMPs) lack ecological management requirements (43 CFR § 4180.1 - Fundamentals of rangeland health) and predate the obligation to protect objects in the monument. New AMP requirements are needed and as permits are renewed, applied to updated AMPs.

All alternatives say that "Livestock grazing is managed through allotment management plans, which consider the protection, maintenance, enhancement, and restoration of soil resources." BLM should incorporate more specific direction for protection of biocrusts from grazing into the

final EIS. Allotment Management Plans (AMP) in the Grand Staircase National Monument predate the monument proclamation and may be as much as 50 years old. These older AMPs follow minimal requirements described in the regulations (43 CFR § 4120.2). The requirements for these AMPs do not include a requirement to protect, maintain, enhance or restore soil resources, or to protect Monument objects. These plans "prescribe the livestock grazing practices required to meet resource objectives." These objectives are not described and, in review of many AMPs in this monument, favor increased grazing use over ecological recovery and protection (BLM 2008). Furthermore, the BLM has not prepared AMPs for all of the allotments. Some of the existing AMPs are decades old and, as aforementioned, fail to meet current ecological and monument management obligations. Also, land health assessments suggest management of livestock grazing is at least partly responsible for the current poor conditions of soils and biocrust (GSENM 2008).

Similarly, there is no evidence to support the DEIS's contention that vegetation projects would restore biocrusts eventually in spite of the initial disturbance. We note that the analysis period used to discuss cumulative effects and impacts is the 20-year life of the plan. BLM appears to be saying that biocrust will recover from intensive, large-scale mechanical damage before the end of the 20-year analysis period. Biocrusts will not recover over this short time period. This exception to the prohibition on surface disturbance should be omitted. It would be more congruent with the stated soil objectives to "Protect, maintain, enhance, and/or restore soil health, productivity and stability, and infiltration to prevent erosion from disturbance and to provide for optimal plant growth and site potential" (DEIS at 2-19). Alternative objectives must be consistent with one another.

See the Grand Canyon Trust's April 2023 "Mollies Nipple Condition Assessment" and "Hackberry Canyon Condition Assessment," and the Center for Biological Diversity's "Cattle Impact Surveys in Grand Staircase Escalante National Monument" (Nov. 2023) in Appendix A and C for further documentation of cattle impacts to biocrust. We specifically request that BLM review, analyze, and respond to this data in any subsequently prepared NEPA analysis.

Row 23

We support the shared management direction of alternatives B-D with the inclusion of public participation prior to the allowance of soil-disturbing discretionary actions on vulnerable soils and biocrust. The soil health and restoration plan should be available for public input.

Row 23 Rationale

We appreciate the development of a soil mitigation and restoration plan for surface disturbing actions. However, it's difficult to conceive of a surface-disturbing discretionary action that also fully avoids, minimizes, and/or compensates for adverse effects. We ask that you allow public review of any restoration plans. Such actions should follow the management direction stated in

Alternative D of the row 22 management direction and occur only for purposes of land health restoration. Please emphasize that soil-disturbing discretionary actions will be strictly limited to those activities expected to result in soil and biocrust improvement within the life of the plan (i.e., the 20-year analysis period).

Vegetation Management

Protects Monument Objects:

- Emphasis on natural processes and non-surface-disturbing restoration activities in the Primitive Zone.
- Commitment to conducting land health assessments over the next 10 years, and prioritizing those allotments in watersheds outside of AIM benchmarks.

Needs work:

- The final MMP must explicitly stipulate the use of native seed only in vegetation projects except in emergency situations. If native seed is not available or too expensive, defer the project if possible until native seed can be acquired. Work with state and non-profit partners to source appropriate native seeds as necessary to properly protect Monument objects.
- The term "emergency" needs to be explicitly defined or it will be interpreted too broadly. Exotic species should only be used where soils and biocrusts are actively eroding and there is risk of exotic plant invasion- this is consistent with the protection of Monument resources. Even then, these species must be limited to short-lived, non-persistent non-native species.
- The management of livestock post-treatment to promote plant survival with the use of monitoring data to indicate that site objectives are met is a great start. However, the plan should state more explicitly what those objectives are and how monitoring will determine that they have been achieved.
- The action proposed for restoration on allotments in the Primitive Zone where livestock grazing will continue is not passive restoration. That term implies that anthropogenic impacts will be removed and natural processes will then be restored naturally without further management action. The continuation of grazing, by definition, does not allow for passive restoration.
- The analysis of the carbon sequestration potential of vegetation projects and fire needs more detail and more scientific support. See discussion under Climate Carbon and Carbon Sequestration below. We encourage BLM to ensure that any future analysis complies with the Council on Environmental Quality's 2023 "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change," which specifically addresses how agencies should analyze biogenic carbon emissions in land and resource management planning. See 88 Fed. Reg. 1196, 1207 (Jan. 6, 2023).

Areas where Monument objects are not protected:

- Mechanical treatment techniques on GSENM are correlated with degraded soils, biocrust, and vegetation over time (Miller 2008). Instituting more of these projects without addressing the management issues surrounding them will result in the perpetuation of resource damage. Vegetation treatments initially produce more highly desirable forage. This attracts heavy concentrations of livestock and wildlife that damage soils and biocrust and, if allowed, overutilization that eventually diminishes the resilience and resistance of the vegetation to perturbations like drought and climate change.
- The term "desired" plant community is not defined. The FEIS should clarify that it refers to native species, which are protected objects in Proclamation 10286. Non-native forage species are not desirable because they can outcompete native species and shift the functional group constitution of vegetation communities long-term.

Alternatives Comparison

Row 25 (and all rows thereafter)

Explicitly define "desired" plant community as native in row 25 and all rows thereafter.

Row 25 Rationale

Functioning, native plant communities, including pinyon-juniper communities, relict grasslands, and the sagebrush-steppe are specific Monument objects in both Proclamation 6920 and 10286. The goal of vegetation management should be to restore and maintain the ecological functioning of soil, hydrology, and vegetation while protecting other Monument objects as well. This can best be accomplished by restoring and maintaining biodiverse native vegetation communities. Native plants have the highest levels of resilience and resistance to perturbations over the short-term (e.g., drought) and long-term (i.e., climate change). Finally, they are the most adapted to local conditions and are likely superior choices for local pollinators and wildlife.

Row 26

Adopt the language from Alternative D in the final plan, with the following modifications:

> "Protect, maintain, enhance, and/or restore ecological processes and functions to increase climate resiliency, *through proactive manual methods of vegetation management and the prioritization of natural processes.*" [*Emphasis* added to modifications].

Row 26 Rationale

The term "passive restoration" is defined loosely in the DEIS as prioritizing natural processes and techniques (FEIS at 3-135). In the restoration field it also means that the sources of disturbance are removed. (Vaughn et. al, 2010) Considering that livestock grazing will continue

in most allotments in the Primitive Zone, this action by definition does not allow for true passive restoration. A modification of the term in the FEIS is necessary.

Mechanical treatment methods (chaining, harrowing, and mastication) have the highest levels of surface disturbance. Data on earlier mechanical vegetation treatments on GSENM have shown that they have the lowest land health assessment scores due to high levels of soil erosion and compaction, overutilization of vegetation, increases in exotics, and shifts from native to non-native species, and changes in vegetation functional groups, including loss of biocrust and decreases in palatable cool season grasses to less palatable warm season grasses (GSENM 2008).

Alternative D is the alternative that most closely aligns with protection of Monument objectives in the Primitive Zone. However, it should also allow for manual methods of vegetation management. Passive restoration works best in areas that have not departed too far from reference conditions and still have at least remnants of healthy vegetation, soils, and biocrust to provide a source of native materials. More inputs may be necessary in a site that has already been degraded beyond that point. The DEIS at 3-76 makes an argument for this by stating, "Areas where vegetation has been degraded by invasive annual grass expansion, fire suppression, or excessive livestock grazing may not be able to return to its previous state, or desired conditions, without active management." Manual application of herbicides where location of application is carefully controlled to avoid non-target species and locations should be considered. Seeding and planting with native vegetation may be necessary even if seed bank tests show that seeds are present in sufficient levels and species to effect restoration. Row 26 should include language allowing non-surface-disturbing manual restoration techniques such as these.

Row 27

Include the word "native" before "functional vegetation communities" in Alternative C and include "pinyon-juniper woodland and" before "sagebrush-obligate species."

Row 27 Rationale

Alt D goals are to, "Protect, maintain, enhance, and/or restore native" vegetation communities. Alts B and C simply say, "Protect and restore functional" vegetation communities. We are not sure how omitting "maintain" and "enhance" will change vegetation management goals, but substituting "functional" for "native" implies the use of non-native plant species in restoration or the goal of converting functional native communities like sagebrush and pinyon-juniper woodlands into other vegetative types. This is not ecologically appropriate.

While we understand and appreciate that seeding with non-native species may solve some resource problems in the short term, using them to protect treatment sites from the risk of increased soil erosion and exotic species invasion (often exacerbated by that same treatment),

can cause problems in the longer term. These species are aggressive and can slow or prevent restoration of native species. Once established, they are very hard to transition back to native vegetation communities and their spread can result in degraded soil, vegetation, and wildlife habitat conditions. This goes against guidance to manage for the restoration of native species assemblages as the most resistant and resilient vegetation communities.

For example, crested wheatgrass is an invasive species with negative ecological effects (D'Antonio and Thomsen 2004), harmful (by destroying habitat capability) to native birds, mammals and reptiles (Reynolds and Trost 1980, McAdoo et al. 1989, Call and Maser 1985, Connelly et al. 1991), and makes poor mule deer forage (Urness et al. 1993). Crested wheatgrass suppresses native plant diversity and soil biota (Christian and Wilson 1999, Byers 2004, Jordan 2008). Crested wheatgrass plantings have lower nitrogen fixing potential (Christian and Wilson 1999). Crested wheatgrass spreads into surrounding native habitats, and is therefore invasive (Bakker and Wilson 2004, Pyke 1990, Jordan et al. 2012) and is very difficult to get rid of once established (Lavin et al. 2013, Davies et al. 2013, Gasch et al 2016, Nafus et al. 2020). Crested wheatgrass causes an 82% decline in carbon sequestration vs. native vegetation (Kauffman et al. 2022, and see Verburg et al. 2004 and Hooker et al. 2008).

The plan should include actions that will promote native seed sourcing and establishment of a Monument-specific native seed bank. A proposal in a Burns, OR EA contains detailed plans for using native plant materials: “Shrubs, such as sagebrush species and antelope bitterbrush, would be planted as seedlings…” “If possible, local seed would be gathered and sent to a nursery for growing a portion of the seedlings, in order to have some site adapted plants available for reestablishment. Seedlings would be planted by volunteers, BLM staff, or contractors in the late fall to early spring of each year.” GSENM should consider adopting something similar in this RMP, which is especially appropriate in this science and research-focused Monument.

Row 30

Alternatives B, C, and D preferred.

Row 30 Rationale

The AMS describes data from riparian PFC assessment and notes that 23 percent of riparian sites were functioning at risk with no apparent or a downward trend. (U.S. Department of the Interior. 2015) That means that more than 1 in 5 riparian areas are functioning at risk. Proclamation 10286 speaks to the importance and value of riparian corridors within the Monument to wildlife and overall ecosystem functionality. In order to properly protect Monument Objects, it is imperative that riparian areas are, at the very least, protected and restored to proper functioning condition.

Row 31

Combine the language used in all alternatives. “Ensure functioning, healthy riparian and upland systems through proactive management consistent with the protection of GSENM objects. Protect, enhance, and restore water quantity and quality.”

Row 31 Rationale

For proper protection of Monument Objects, vegetation restoration methods should not be allowed in riparian areas unless needed for removal of noxious weed species or restoration of disturbed sites. (from RIPA-5 in 2000 MMP). Riparian vegetation and dependent wildlife are listed as Monument objects requiring protection in Proclamation 10286.

Row 32

Include the language from Alternative C with the following modifications adopted from Alternative A and D: “Manage *both relict and* reference plant communities to protect*, enhance,* and restore biological diversity.” [modifications emphasized].

Row 32 Rationale:

Relict plant communities and hanging gardens are specifically listed as Monument objects to be protected in proclamation 10286.

Row 33

Alt B and C: stipulate *noninvasive* perennial and annual vegetation vs *native* perennial and annual vegetation.

Row 33 Rationale

See discussion under Rows 25 and 27.

Row 34

We prefer the shared alternative for B and C.

Row 34 Rationale

We appreciate the commitment to complete land health assessments in priority (failing) watersheds within 2 years, take action to remedy said watersheds within 5 years, and complete land health assessments across GSENM within 10 years. We do recommend that land health assessments in failing allotments be prioritized within 2 years. See Row 19 rationale.

Row 36

Adopt the language from Alternative C in the final plan with the following additions:

> "Implement landscape-scale ecosystem restoration projects to restore *native* functional vegetation communities *with the use of soil type and Ecological Site Descriptions to determine restoration-appropriate areas.*" [*Emphasis* added to addition].

Leave the language from Alternative A out of the final plan.

Row 36 Rationale

Omitting the word "native" in Alternative C implies the use of non-native plant species in restoration. This is not ecologically appropriate and incongruous with the protection of Monument objects. (See rationales for Rows 25 and 27.)

GSENM was established, in part, to restore and protect native ecosystem processes with native plant species. This includes pinyon-juniper woodlands. Proclamation 6920 specifically recognizes these woodlands as a Monument object and value: "The monument contains an extraordinary number of areas of relict vegetation, many of which have existed since the Pleistocene, where natural processes continue unaltered by man. These include… pinon-juniper communities containing trees up to 1,400 years old."

Pinyon-juniper woodlands have been the targets of vegetation treatments for nearly a century. The effect of said treatments spanning 40 years on vegetation and ground cover in GSENM was studied by Redmond et al. (2013). They found that decades-old treated areas had increased forb and grass diversity, but this increase included non-native species like crested wheatgrass and cheatgrass. Bare ground was also higher in the treated area than in the control, even decades later. Young trees were again expanding into the treatment sites, but most were juniper. This result led the authors to caution that treatments removing both pinyon and juniper may risk loss of pinyon pine over time, facilitating a type conversion from pinyon-juniper to juniper. They recommended more selective tree removal focusing on juniper if fewer trees were deemed ecologically appropriate for the site.

Research suggests that phase III pinyon-juniper woodlands (tree-dominated, with limited understory) should not be targets of vegetation treatments. (Floyd, et al. 2008). There is growing concern that many pinyon-juniper woodlands that have been treated or burned by wildfire in recent years will not return. Instead, these former P-J woodlands are being replaced by shrubland, perhaps because changing climatic conditions are preventing the successful recruitment of young trees. Indeed, across the intermountain west, pinyon-juniper "encroachment" is less a concern ecologically than loss of these ecosystems as they contract in the face of climate change. (Redmond, et al. 2023).

The BLM needs an objective, transparent decision-making procedure based on the best available science to determine whether and where to conduct treatments. At the very least soil

type and Ecological Site Descriptions must be used, and the ages of trees within proposed vegetation treatment areas must be determined in order to retain old-growth and mature trees.

According to the AMS, the BLM used data from the Rangeland Analysis Platform to compare "estimated tree cover using average values between 1986 and 1995 with estimated tree and shrub cover using average values between 2012 and 2022"(p. 5-11). It is noteworthy, however, that the cover estimate from 2012 - 2022 included shrubs while the 1986-1995 estimate did not. This is not a direct comparison of tree cover. The higher percent cover reported in the later period might simply be because it includes shrub cover in the estimate. Additionally, many tree removal projects were conducted from 1986-1995, so the increase in 2012-2022 might just be a return to levels expected for those ecological sites rather than expansion. This should be taken into consideration when determining vegetation-removal projects.

Row 37

Adopt the language from alternative D with the following modifications:

"...the use of nonnative vegetation may be approved *for emergency actions only that call for* phased restoration efforts that lead towards a native vegetation community." [Emphasis added to modifications].

The term, "emergency actions" need to be explicitly defined.

Row 37 Rationale

Although native species restoration is a stated goal in the DEIS, Alternatives B and C also allow the use of nonnative vegetation for restoration purposes. The RMP should promote and encourage the use of native vegetation by disallowing the use of non-natives seeds except in *emergency situations*. Our concern is that the agency will use non-native plants preferentially since they are less expensive, often more easily available, and produce forage quickly. This short-term advantage does not comply with the long-term goal of native ecosystem restoration, however. We recommend that non-natives only be used in limited, emergency situations only when it can be proven that native species are unavailable or inadequate to stabilize soils and prevent establishment of non-native invasive species. In these situations, if non-native plants are selected, they must be short-lived nurse crop species that are not competitive with natives, will not persist longer than a few years, and are unlikely to spread from the project site. Plans should include a transition to native species as soon as possible and a research component should be required.

The definition of "Emergency Stabilization and Rehabilitation" on page 8 in the Glossary is too broad. Please add the following language to the definition:

> "Emergency Stabilization and Rehabilitation: Actions to stabilize and prevent unacceptable degradation to land or resources *immediately following catastrophic events such as fire or flooding,* to minimize threats to life or property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources." [*Emphasis* added to additions].

We suggest that GSENM develop an explicit procedure to guide the use of non-native species. One tool might be a decision tree to show step-by-step the requirements for using non-natives. It may be helpful to involve the Monument Advisory Committee to decide if the use of non-native seed is necessary, as was required in the 2000 GSENM MMP.

Row 38

We support the shared alternative for B-D; however, we request that the DEIS provide more specific guidance on what measurable objectives must be met before livestock are allowed to resume grazing after seeding has occurred. In addition, we request that vegetation monitoring data be shared digitally with the public, and that Interested Publics be informed before this action takes place.

Row 38 Rational

We are heartily in favor of managing livestock post-treatment to promote plant survival, and we are pleased that the DEIS requires monitoring data indicating site objectives are met. However, the plan should state more explicitly what those objectives are and how monitoring will determine that they have been achieved. For example, a requirement could be that cover percentages of ground cover categories (biocrust, perennial native grasses, native shrubs) must be 80 percent of what would be expected in a reference condition (or no more than 10 percent in the case of bare ground or invasive exotics), as appropriate for the Ecological Site Group. This specificity is necessary and appropriate in the plan. In our experience, management plans often call for resting vegetation management projects "for two years or until recovery objectives have been met", but in practice most projects default to the minimal rest period regardless of plant establishment. Specific recovery objectives that provide clear goals are called for.

Row 39

Include "relict plant communities and hanging gardens" in the shared Alternative for B-D. If these vegetation types are included in "reference communities", that should be made clear in the RMP.

Row 39 Rational

Relict plant communities and hanging gardens are specifically listed as Monument objects to be protected in proclamation 10286.

Row 40

Adopt the language from Alternatives B/C/D in the final plan, and add the following additional detail:

> "Avoid new discretionary actions within *active floodplains or within* 330 feet of *springs,* riparian, *and/or* wetland areas…" [*Emphasis* added to modifications].

Row 40 Rationale

Riparian areas are active and changing. 330' from riparian areas may not be adequate in a flood event. Avoiding the active floodplain is more protective than specifying a specific distance.

Row 41

Alt C /D prohibits discretionary activities in hanging gardens unless they protect them. Please include "HYDRO-5: Surface disturbing research will not be allowed in hanging garden areas" from the 2000 MMP.

Row 41 Rationale

Hanging gardens are specifically listed as Monument objects to be protected in proclamation 10286.

Row 44

We support the management direction in all action Alternatives; however, it should explicitly state that manual methods of controlling weeds will be preferred where Monument objects occur and that the aerial spraying of herbicides will be prohibited.

Row 44 Rationale

It is the agency's duty to protect Monument objects such as biocrust, occupied and unoccupied habitat of rare plants or animals, water sources, etcetera. Mechanical methods of treatment and aerial spraying threaten the wellbeing of Monument objects and should be prohibited.

Water Resources

Protects Monument Objects:

- Management of aquatic habitat and water uses to help increase climate resiliency, management that considers expected changes in water availability due to climate change, management which will not authorize activities that could contribute to water impairment.

Needs work:

- The use of rangeland health standards to determine watershed hydrologic health is a

start, but is ultimately inadequate to identify whether Monument objects are impaired or not. Instead, the agency should utilize the monument science program to design a method to adequately assess the condition of and potential impacts to Monument objects.

Areas where Monument objects are not protected:

- There is no suggestion of conducting field assessments specifically to identify places where water quality is impaired, there are no measures in place to maintain watershed health post-restoration, and there is no mention of prohibiting new wells within the Monument.

Alternatives Comparison

Row 45

Adopt the language from Alternative B and C in the final plan. Include, "ensuring the proper care and management of GSENM objects," from Alternative A.

Row 45 Rationale

Without the requested addition, there is the possibility of Monument object degradation through a determined restoration process (i.e. grazing). Proclamation 6920 notes the, "scarce and scattered water sources," of the Monument and directs the Secretary, "to address in the management plan the extent to which water is necessary for the proper care and management of the objects of this Monument."

Row 46

We support the shared alternative for Alternatives B-D.

Row 46 Rationale

We appreciate the objective which considers expected changes in water availability due to climate change with the intention of managing aquatic habitat and water uses accordingly. We request that the BLM consider the synergistic impacts that cattle grazing can have with climate change in relation to water availability. Cattle grazing can lead to significant soil compaction, reducing soil infiltration rates and decreasing soil water storage, thus contributing to reduced base flows. (Beschta, et al. 2012) During periods of high-intensity rainfall, compacted soils contribute to increased surface runoff and soil erosion. (Beschta, et al. 2012) These impacts by cattle on hydrologic processes are expected to be exacerbated by and synergistic with climate change.

Row 47

We support the language used in Alternative B and C with the following modifications:

> "*The BLM will design condition assessment methods to adequately* protect and restore natural hydrologic functions of watersheds." [*Emphasis* added to modifications]

Row 47 Rationale

Recognizing the limitations of current Rangeland Health Standard assessment methods to protect Monument objects, this plan calls for a review and revision of these assessment methods. Using independent conflict-of-interest free scientists, design condition assessment methods to protect and restore the biological and other natural hydrologic features and functions of watersheds.

The assessment methods that BLM uses to assess Utah Rangeland Health Standards are inadequate to consistently identify if Monument objects are impaired or not. BLM's methods for stream and spring assessments fail to determine if the full range of natural biological factors are intact.

For streams, BLM uses Technical Reference 1737-15, Proper functioning condition (PFC) assessment for lotic areas (Dickard et al 2015). PFC assessments involve field surveys of a stream section to make yes or no answers to 17 indicator item questions. For example Item 9 asks the BLM team to provide a yes or no to "Species present indicate maintenance of riparian soil-moisture characteristics." The team then concludes if a stream meets standards (is PFC) or does not meet standards and is Functioning at Risk (FAR) or nonfunctional (NF).

TR 1735-15 limits the scope of the PFC survey to just measure the ability of a stream to endure a significant flood without severe erosional damage. This is important but is only one part of a more comprehensive assessment for the properly functioning condition for a riparian area. PFC also must ensure that a stream has "diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses" And supports "greater biodiversity." This exact language was a requirement in the 1998 version of TR 1735-15 and removed in 2014. These biological characteristics just described and more are essential in order to determine if an object (a riparian area) is impaired. The current PFC assessment method fails to meet this legal obligation for protecting Monument objects.

BLM uses another Technical Reference, TR 1735-16 to assess slow moving water areas (Gonzalez and Smith 2020). Called lentic systems, these include seeps, springs, marshes, swamps, bogs, fens, muskegs, prairie potholes, wet and moist meadows, oxbows, shallow (2 meters deep or less) lakes and ponds, and constructed reservoirs. As with the stream PFC assessment, TR 1735-16 focuses on the stability of an area to resist erosion and acquire adequate saturated soils. While many valuable attributes are checked, TR 1735-16 is seriously incomplete. The biological need to protect expected native species and a riparian area at its

natural ecological potential is not assessed. The lentic PFC assessment too is inadequate to evaluate if Monument objects are impaired.

Because these two cited rangeland health assessment methods are inadequate for the monument, they also are inadequate in making management decisions or designing and evaluating restoration. The remedy for this plan is to recognize this shortcoming and, using the monument science program, design and validate a method to adequately assess the condition of Monument objects. Where needed, this science program would validate restoration methods and guide management of conflicting uses.

Row 48

Adopt the language from Alternative C. Include the words "maintain and enhance" from Alternative D. Describe the "measures of protection," that may be taken.

Row 48 Rationale

Proclamation 10286 describes riparian ecosystems, hanging gardens, rivers and streams as Monument objects. GSENM's water sources support a diverse array of life in an otherwise arid landscape. Due to the invaluable nature of these water sources, "protection" must be defined. For example, if watershed hydrologic conditions are impaired largely due to grazing practices, and grazing continues in that watershed, then this would not constitute proper protection. To continue with the grazing example, if restoration efforts are made and grazing continues, then the watershed conditions are likely to degrade again. This is why it is so important to use the word "maintain" in the final plan.

Row 49

Adopt the language from Alternative C with the following modifications:

> "*Conduct assessments to identify places where water quality is impaired to properly* protect and restore water quality to meet the State of Utah water quality standards." [*Emphasis* added to modifications].

Row 49 Rationale

For rationale on removal of "Rangeland Health Standards", see Row 47 rationale. The AMS indicates that "For the 2022 reporting year, forty-one percent of assessment units within the decision area were classified as impaired and failing to meet water quality standards," which is very concerning. To properly protect and restore water quality in GSENM it is necessary to identify and remedy the causes of impairment to prevent further degradation.

Row 51

We support Alternative C with the following addition: “To properly protect and restore water quality in GSENM, assessments will be conducted to identify causes of impairment.”

Row 51 Rationale

See Row 47 and Row 49 rationales.

Row 56

We support Alternative D. It is most protective of water quantity in groundwater and surface waters.

Row 56 Rationale

This objective appears to address providing for the availability of surface water. The preferred alternative provides for infrastructure (e.g., wells, pumps, pipelines, troughs, dugout water holes) that can cause damage to Monument soils and vegetation by facilitating the establishment of exotic species, impacting vegetation and soils, and potentially altering hydrologic patterns. Alternative D prohibits “additional human made infrastructure” and thus is more protective of hydrologic processes and the springs and seeps that depend on them.

Rows 57

We generally support Alternative C, but please add the following language: “A hydrological analysis will be conducted prior to installation of water sources for recreation. Pump tests and monitoring will be required to protect springs, seeps, and the aquatic, wetland, and terrestrial biota that depend on these habitats.”

Row 57 Rationale

We are in favor of providing drinking water to the public but sanitary needs can be met with pit or composting toilets (the latter was successfully implemented at the Paria Movie Set before it was burned). Protecting water availability for Monument objects should take precedence over recreational water needs if both can’t be accommodated. We recommend that recreation-related water developments be minimal and limited to drinking water in high-use areas of the Front Country. New water developments should be analyzed via the NEPA process to determine potential impacts to GSENM objects to ensure those objects, as well as aquatic, wetland, and terrestrial organisms, will not be harmed.

Row 58

We support Alt D but with the following modifications:

> "Prohibit new water developments unless the primary purpose of the water development is to protect or restore the resiliency GSENM objects. *No new wells, pipelines, or troughs will be installed solely for livestock or to address livestock impacts to Monument objects.*
>
> *Existing water developments will be evaluated to ensure consistency with the protection of Monument objects and values.* Existing water developments for livestock or native terrestrial wildlife could be maintained or modified, where it protects, restores, and/or increases resiliency of GSENM objects." [*Emphasis* added to modifications].

Row 58 Rationale

The BLM often addresses impacts from livestock damage around water sources by installing new developments away from the damaged sites. The language in the alternative that permits new developments if they "protect and restore resiliency of Monument objects," allows BLM to claim that new livestock waters will have this effect. However, there is no research supporting this conjecture. In fact, new developments are more likely to introduce more impacts into new areas such as expansion of exotic plants and destruction of soils, biocrusts, and vegetation. "When cultural resource sites are found in the vicinity of these (developments), the adverse impacts on these sites can rise significantly." (Appendix D, p. D.13). Until research demonstrates that installing new water developments will reduce livestock damage to monument resources and will not result in new damage at new sites, BLM should first remedy resource impacts around water sources with actions such as reduction in stocking rates and utilization, changing season of use, or long-term rest with native vegetation restoration.

In addition, groundwater pumping has the potential to reduce spring flows and negatively impact hanging gardens and wetlands associated with springs, which are all Monument objects that must be protected. While we strongly believe the BLM should not allow any new water developments for livestock, *if* the agency does permit this, we request that the following criteria are considered. We also suggest evaluating all existing water developments. If impacts to Monument objects, including rivers, creeks, springs, cultural resources, and riparian vegetation and wildlife habitat, are occurring, the well must be decommissioned.

Any water developments that will draw on groundwater should have a full hydrologic analysis completed. This analysis should consider locations of the wells in relation to faults in the watershed. Fractured rock generally has greater groundwater storage and better recharge. Unfractured rocks generally have less storage and slower recharge. Wells in unfractured areas mean that groundwater pumping from wells will likely be more connected to local springs. The

demands on the aquifer, recharge rates, and residence time of the groundwater should all be considered.

Moreover, in consideration of the long-term aridification that the Southwest is experiencing, even the recharge rates at higher elevations need to be re-evaluated, particularly in light of the proposed wells and their assumed life spans. Stable isotope tracing, including springs in the proposed project area, could reveal the residence time for groundwater emerging from springs. There is great variability in residence time, with some if it certainly being modern recharge (Kimball & Christensen, 1996). If we presume that some water development locations will have modern recharge and combine that with the long-term aridification that started as a drought in 2000, it is reasonable to conclude that aquifers could already be declining, further putting Monument objects such as seeps, springs, hanging gardens, riparian areas, and rivers and streams at risk.

An inventory of springs in the Escalante River drainage system in 2006 shows variability in residence times, as well as "lengths and differences in the hydraulic conductivity of the Navajo Sandstone in the study area. Variability of this sort was observed when groundwater residence times were calculated for springs discharging from the Navajo Sandstone at Zion National Park (Kimball and Christensen, 1996)." (Rice and Springer, 2006). Rice and Springer indicate a strong influence of recharge water from Boulder Mountain to the north for springs in the Escalante watershed. We cite this not for specific information for any specific water developments, but to point BLM's attention to the extensive analysis that must be done to understand groundwater, as well as the great variability not only between geologic layers, but even within the same layer. It is impossible for the BLM to make arguments that water developments that pull groundwater will not impact surrounding seeps and springs without individual site analysis for every proposal.

The BLM should conduct pumping tests on existing wells at similar elevations in the watershed and monitor the results and impacts to adjacent springs and wells. While EAs for wells often state that it will conduct pump tests at the new wells, it would be better to perform pump tests on existing wells to test the impacts on the aquifer *before* installing additional wells. It is possible to monitor springs and wells simultaneously, either with someone camped at a spring or with a pressure transducer if there is enough flow rate. The permittee should install flow meters on all wells to be sure that they are staying within their water right, which could be ensured with four quarterly visits.

Row 59

We would like to see a combination of Alternative B, C, and D.

Alternatives B,C, and D say they will, “Prohibit new water developments in natural plant communities that lack invasives.”

There need to be more stipulations here, including a number or percentage of invasives in a given area that will determine whether to prohibit or allow new developments, as well as preventive actions that will be taken to mitigate the spread of invasives.

Alternatives B and C, “Allow maintenance of existing developments... to best conserve multiple resources,” while Alternative D says, “Existing improvements would be removed unless this would additionally harm resources.”

Assess and determine whether existing developments are consistent with the protection of GSENM objects. If existing developments are determined to be consistent, maintenance will be permitted. If existing developments are determined to be inconsistent with the proper protection of Monument objects, they will be removed.

Row 59 Rationale

The language used in Row 59 suggests that the agency is aware of the issues surrounding new development disturbance and the spread of invasive non-native plant species. In order to properly protect GSENM objects, the suggested guidelines must be taken into account. Simply prohibiting new developments in areas that lack invasives allows for development in plant communities with very few invasive individuals present. With no measures put in place to prohibit the spread of invasives, new development actions could alter the plant community from a dominantly native community to a dominantly invasive non-native community. To include no stipulations related to percentage of invasives present or methods of invasive mitigation is ecologically irresponsible.

See row 58 rationale.

Row 60

We support everything in Alternative C, but request that the word “prohibit” replace “avoid.”

Row 60 Rationale

Valid existing rights must adhere to the prohibition of degradation. Prohibit is a stronger word than avoid and ensures the proper protection of invaluable Monument objects including rivers, creeks, springs, riparian vegetation, and riparian-dependent wildlife.

Cultural Resources

Protects Monument Objects:

- The proposed plan contains an underlying framework that could adequately protect cultural resources, some of which are Monument objects. But because much of the detail is omitted, it is difficult to assess how effective this framework will be at the implementation level.

Needs work:

- Proclamation 10286 recognized the important connection that Tribes have to the GSENM. Archeological and cultural resources are repeatedly identified in the Proclamation as Monument objects. The RMP must ensure protection and care of these objects in consultation with the Tribes. And this consultation must be more than a mere formality; it must be "meaningful dialogue where the viewpoints of Tribes and the Department, including its Bureaus and Offices, are shared, discussed, and analyzed."[2] Further, BLM must approach consultation utilizing the consensus-seeking approach as outlined in the Department's revised Tribal Consultation policies and procedures (512 DM 4, 512 DM 5), which were finalized in December of 2022, and Executive Order 13175. We appreciate the work the BLM has already done to facilitate tribal engagement, but we believe additional work is necessary.

Areas where Monument objects are not protected:

- There is little to no direction in the alternatives matrix as to *how* Monument objects will be protected; it only states that they will be. We recognize and support that the BLM intends to address this issue, to some extent, in the cultural resources management plan. But it's unclear how comprehensive this plan will be, and if it will be subject to public participation. The cultural resources management plan should be subject to public and tribal participation under both Section 106 and NEPA, and the BLM should be working closely with the Tribes to develop a framework and draft.

Alternatives Comparison

Row 61

I*n consultation with Tribes*, identify, document, preserve, protect, *and/or enhance* cultural resources to ensure that they are available for appropriate uses for present and future generations *of Tribal communities* on BLM-managed lands. (additions in italics)

Row 61 Rationale

BLM has the ability to enhance cultural resources, not just protect them. The removal of cow dung or an invasive plant species from an archaeological site could enhance it, beyond just

[2] E.O. Departmental Manual 512 DM Part 4, Section 4.6.;

protecting it. Additionally, it is our understanding that Tribal Nations often hold an earth to sky perspective of the landscape in which many, if not all, of the resource areas are considered a cultural resource, thereby making something such as a springs restoration project the enhancement of a cultural resource. However, because there can be a wide range of cultural beliefs and best practices regarding restoration of cultural resources, BLM should consult with Tribes before undertaking enhancement of cultural resources.

Row 63

We oppose the common goal for Alternatives B/C/D. The Agency should not include this as a goal.

Row 63 Rationale

We recognize the relationship between the GSENM and pioneer heritage is specifically identified in the Proclamation, but it is generally described in the context of specific locations, such as Dance Hall Rock. It is unclear what "providing opportunities to connect to pioneer heritage" entails, but the Agency must clearly explain what type of activities it may approve pursuant to this goal and assess the associated environmental impacts.

Row 64

The Agency should adopt the common management direction for alternatives B/C/D but require Tribal consultation during identification and only with modifications requiring Tribal consultation before undertaking site stabilization.

Row 64 Rationale

It is our understanding that not all GSENM-affiliated Tribes support archaeological site stabilization as a default practice to be used in all situations. Any objectives involving site stabilization should be developed in consultation with Tribes.

Row 65

The Agency should adopt the common management directions for alternatives B/C/D but with the following modifications (in italics):

In consultation and collaboration with Tribes, avoid, ~~reduce,~~ and/or remove imminent and long-term threats to cultural resources. *These threats include but are not limited to threats from livestock and cattle grazing, vegetation management, and climate change.*

Row 65 Rationale

Tribes may wish to contribute Traditional Knowledge or practices surrounding care and management of cultural resources. Identifying the existence of threats without at least broadly identifying what those are provides no real management direction.

Livestock grazing can have various harmful impacts on cultural resources, including direct damage such as the rubbing on and knocking down of standing structures, churning near-surface cultural deposits, breaking or displacing artifacts by trampling, dung accumulation on site surfaces, and rubbing against petroglyphs, pictographs, and historic inscriptions. Indirect effects may include grazing-induced or exacerbated erosion and changes in vegetation and soil chemistry due to dung and urine concentrations. Additionally, range infrastructure like water developments, fence building, and road construction can potentially affect cultural resources.

Direct impacts from livestock can result in damage to both prehistoric and historic structures, petroglyphs, pictographs, and historic inscriptions through contact and churning near-surface cultural deposits.

The DEIS admits many of these impacts, thus underscoring the need for BLM to engage in Tribal consultation on livestock grazing. For example, the DEIS states:

> Livestock grazing would occur to varying degrees under all alternatives and is another stressor that creates potential impacts on cultural resources through breakage of artifacts, mixing of deposition contexts, deterioration of structures, and acceleration of erosion in grazed areas. Experimental studies have shown that livestock trampling impacts both the physical artifacts and features of a site. It also distorts the most common analytical approaches to measuring sites, such as artifact abundance, raw material proportions, and average artifact dimensions

DEIS at 3-147. *See also id*. at 3-148 (reaching similar conclusion). "Shelter and alcove settings can suffer from the immediate and cumulative physical effects of livestock." DEIS, Appx. D at D-8. "Livestock can adversely affect" petroglyphs, pictographs, and inscriptions. *Id*. at D-9. "Observation has shown that sites in the immediate vicinity of … range improvements that focus on livestock-related activity suffer more than those in backcountry situations." *Id*. "[R]ange improvements, including fence lines, corrals, water sources, salt licks, and driveways …. [all] tend to focus livestock use into certain areas, concentrating the related adverse effects. When cultural resource sites are found in the vicinity of these improvements, the adverse impacts on these sites can rise significantly." *Id*. at D-13. In addressing the impacts of livestock on known cultural sites, the DEIS states: "the amount of impact a cultural resource site might suffer from livestock is, to a certain degree, proportional to the number of livestock on that site at any given time…. Area closure to livestock, either on a temporary or permanent basis, is the only mitigation strategy that would remove all potential for grazing-related adverse effects on anything above a site-by-site basis." *Id*. at D-14; *see also* DEIS at 3-156 (making fewer acres available for livestock grazing will result in increased protection for cultural resources). Reducing the area of lands available for livestock grazing could also result in decreased impacts to resources of tribal importance. DEIS at 3-169.

Other data confirm these impacts. In a study conducted by archeologists from the NPS Midwest Archeological Center in Capitol Reef National Park, Utah, in 1985-1986, experimental plots were

established to evaluate the measurable impact of livestock on artifacts such as ceramics and lithics. They observed that livestock had significant impacts, including breakage, displacement, and burying of surface artifacts. Ceramics were more prone to breakage, which can complicate accurate documentation. The most common impact was vertical or spatial displacement, with approximately 23.6 percent of artifacts moving from their original location. (Osborn et al, 1987)

Masonry sites are particularly susceptible to undermining and toppling of walls, loss of interior features, and churning of cultural fill due to cattle congregating in certain areas. Rock writing sites can also suffer abrasion and erosion from cattle rubbing against cliff faces. (Osborn et al, 1987)

Indirectly, livestock grazing contributes to erosion by altering soil structure, vegetation communities, cryptobiotic crust density, soil nutrients, streambank stability, and stream channel morphology. Soil compaction reduces water and air infiltration, leading to increased ponding, surface runoff, and erosion. Compaction also reduces plant growth and vegetation cover, resulting in erosion along drainages and gully development. Livestock trails can channel water, causing downcutting and initiating gully development. Trails and congregation areas destroy cryptobiotic crusts, increasing soil and sediment susceptibility to wind and water erosion and reducing nitrogen availability for plants. (Bilotta et al. 2007; Fleischner 1994; Gifford and Hawkins 1978; Jones 2001; Trimble and Mendel 1995).

Cumulative impacts of livestock grazing on archaeological sites include ongoing erosion along livestock trails, continued breakage of artifacts, churning of cultural deposits, and architectural elements being knocked over.

Assessing landscape-scale impacts is challenging for archaeologists, as livestock grazing can lead to widespread indirect effects on archaeological resources, such as changes in vegetation and soil chemistry. We recommend interdisciplinary studies for addressing the long-term management of cultural resources within grazing allotments.[3]

Climate change is a threat to cultural resources through increased erosion, increased wildfires, altered vegetation and ecosystems, and rising temperatures. Rising temperatures can accelerate the deterioration of perishables. Climate change can lead to more frequent and

[3] The DEIS's analysis of social and economic values contains a long paragraph alleging the importance of the "custom and culture" of ranching to the Monument (DEIS at 3-372; "grazing on BLM-managed lands has important social and cultural significance, such as way-of-life values for sustaining rural lifestyles and passing on traditions to their children and grandchildren. Some ranching families have been using these lands for generations. These lands help support a ranching culture that is a key part of the social fabric among analysis area communities."). This analysis fails to mention that Native Americans used these lands not for a few generations but for millennia before the largely European settler "ranching culture" became established. BLM must acknowledge that maintenance of the "ranching culture", with its attendant effects on the ecological and cultural landscape, rests upon displacement of the Native peoples and lifeways that came before, and irreversible damage to the land that was and that continues to be stewarded by them.

severe weather events, including heavy rainfall and storms. This can result in increased erosion of archaeological sites, causing the loss of cultural deposits, artifacts, and even eventually standing architecture. Increased erosion can also lead to the exposure of previously buried artifacts, leading to increased risk of damage or looting.

As climate change shifts vegetation composition, including the loss of biocrust, archaeological resources are at increased risk of erosion. Area archaeologists have noted that erosion is, by far, the biggest threat to many archaeological resources. When the cumulative and compounding factors of climate change, recreation, livestock grazing, loss of biocrust, and shifting vegetation communities are considered, it's clear that these are imminent and long-term threats that must be avoided and/or removed. As these are inter-related threats across multiple resource areas, we encourage the BLM to consider threats to cultural resources throughout the RMP.

Row 66

The Agency should select Alternative D.

Row 66 Rationale

Alternative D offers a higher level of protection for cultural resources, many of which are Monument objects. The BLM has an obligation to protect Monument objects and historic properties. Managing high probability cultural resource areas as ROW exclusion areas will prevent degradation of cultural resources. Furthermore, many high probability cultural resources areas have had minimal actual inventories completed; therefore, it is critical to prevent potential damage and loss to both unknown and unknown objects.

Row 67

We support the proposed common management direction for alternatives B/C/D but with the following modifications (in italics):

Develop an implementation-level cultural resource management plan *in consultation with Tribes* to help provide further guidance on resource- and site-specific strategies to ensure the protection of the cultural resources in place and in their original context. ~~The criteria in~~ Appendix D (Cultural Resources) *will be used to guide development of the plan, including* assign*ing* cultural sites to appropriate classifications and *to* guide management of those areas.

The plan will:

- *Manage, and protect, and monitor cultural resources in collaboration with Tribes.*
- *Define "cultural resources" according to perspectives of Tribes.*

- *Provide opportunities and resources for the Tribes to direct and manage the identification and ongoing stewardship of these resources.*
- *In collaboration with the Cultural Preservation Offices, or other individuals or entities designated by the Tribes to address cultural issues, identify and evaluate potential traditional cultural properties (TCPs), sacred sites, cultural landscapes, traditionally significant vegetation and forest products, viewsheds, and culturally significant minerals.*
- *Prohibit domestic pets and pack animals in archaeological sites.*
- *Consult with the Tribes on the management of cattle in archaeological sites.*
- *Establish and implement protective measures for sites, structures, objects, and traditional use areas that are important to Tribes for historical and cultural reasons, including measures to maintain viewsheds, as well as the auditory, visual, and aesthetic settings of the resources. Protection measures for undisturbed cultural resources and their natural settings will be developed in consultation with Tribes.*
- *Close cultural sites to visitation when they are determined to be at risk or pose visitor safety hazards, or for maintenance, or when in use by tribal members for traditional purposes to the extent permitted by law.*
- *Educate recreational users as directed by the Tribes on how to visit respectfully, as well as methods to avoid and reduce impacts to sensitive cultural resources.*
- *Facilitate Native use of traditional cultural properties, sacred sites, cultural landscapes, and traditionally significant vegetation, forest products, and minerals.*
- *In coordination with Tribes, implement actions to minimize potential conflicts with traditional activities.*
- *As directed by the Tribes, determine if/how to address current or future impacts to cultural sites and whether to install protective measures (e.g., fences, stanchions, and/or surveillance equipment).*
- *Manage cultural resources in collaboration with the Tribes for present and future generations in ways consistent with Traditional Knowledge.*
- *Manage natural resources important to the Tribes of the GSENM to allow for cultural uses.*
- *Develop a schedule and methodology for conducting cultural resource inventories in collaboration with the Tribes.*
- *All research, inventories, and monitoring of archaeological resources will be conducted in accordance with applicable laws, regulations, and policy, and will employ tribal members and incorporate tribal policies and protocols to the extent legally permissible.*
- *Monitor sites for potential impacts from climate change, on its own and in relationship to other potential impacts.*

Appendix D will be modified with Tribal consultation to include criteria for site monitoring at a more robust level than is currently proposed. Appendix D at D.11.3 (Archaeological Testing and

Data excavation) will also be reviewed with Tribes to ensure that the analysis of how testing impacts the integrity of a site is in line with their perspective.

Row 67 Rationale

We believe that development of an implementation-level cultural resources management plan is appropriate and must be done in consultation with Tribes. Just as the development of the Tribal Stewardship plan contains specific bulleted direction, we would like to see the same level of direction and detail for the Cultural Resources Management Plan in this Alternatives Matrix. While we have provided some suggestions here, we again urge for meaningful consultation with Tribes for specific direction on cultural resource management.

As written, Appendix D states that only public use sites will receive regular monitoring. As there is only one public use cultural site related to Indigenous heritage in the monument (Catstair Canyon), this level of monitoring is not adequate for the protection of Monument objects. Additionally, Appendix D states that testing does not impair the integrity of a site. We request that Tribes be consulted regarding that statement.

Tribal Stewardship

Protects Monument Objects:

- The goal to "Honor Tribal Nation's stewardship, interests, and uses of GSENM" and the objectives listed under preferred Alternative C in the Tribal Stewardship section are critical to BLM's ability to protect Monument objects and reflect a commitment from the BLM to honor its obligation to work collaboratively with Tribes. Similar to the Cultural Resource Protections goal, objectives, and management directions, there are details missing about how (e.g., process, timeline, cultural trainings, dedicated staff, etc.) the BLM will work with the Tribes to ensure co-stewardship and complete the co-stewardship plan.

Needs work:

- The outline for the Tribal Stewardship plan does not fully adhere to DOI Permanent Instruction Memorandum No. 2022-011 by reducing the decision-making authority of Tribes and not fully committing or embodying the guidance as set forth in the permanent IM on how to fulfill Secretarial Order 3403: Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters. The BLM needs to more fully align the proposed plan with SO 3403 and DOI Permanent Instruction Memorandum No. 2022-011. We have provided some recommendations for how this could be achieved in Row 77, though we defer to Tribal input.

Areas where Monument objects are not protected:

- Because the BLM has not had the level of consultation with Tribes regarding this RMP needed to understand what objects should be protected from each Tribe's unique

perspective and also because so little of this Monument has been surveyed for cultural objects and sites connected to the Tribes histories, it is impossible to know which areas should be prioritized by the BLM for specific co-stewardship activities.

Alternatives Comparison

We support all rows in Alt B/C/D not identified with modifications below.

Row 74

We support Alt B/C/D with the following modifications:
Avoid, reduce, and/or remove imminent and long-term threats to sacred sites, important landscapes, native plants, and other resources important to tribal nations. *These threats include but are not limited to threats from recreation, livestock and cattle grazing, vegetation management, and climate change*. (additions in italics)

Row 74 Rationale

Please see rationale in Row 65 for elaboration.

Row 77

We support Alt B/C/D with the following modifications (modifications in italics and strikeout):
To ensure that management decisions affecting the monument reflect the expertise and traditional and historical knowledge of interested Tribal Nations and people, consult with Tribal Nations to develop a Tribal Nation Co-Stewardship Implementation-Level Plan to provide for specific co-stewardship relationships between the BLM and Tribal Nations. This implementation level plan will address, but may not be limited to, addressing the following:

- ~~Cooperate~~ *Collaborate* in ~~project level planning~~ *land use planning and implementation-level decision-making.*
- ~~Cooperate~~ *Collaborate* in program development (including education and interpretation about species, tribal uses, and other Monument objects), resource protection, and public land access concerning GSENM. *To the degree the Tribes desire, Traditional Knowledge will be woven throughout program development, resource protection, and public land access issues.*
- Regularly coordinate, consult, and engage on resource management priorities including project planning and joint management opportunities within GSENM.
- Cooperatively seek additional partnerships, funds, and authorities to achieve shared tribal and federal land management goals.
- Work collaboratively to ensure Tribal Nations have access to sacred sites and other areas of tribal importance in GSENM for cultural purposes

Row 77 Rationale

Permanent Instruction Memorandum No. 2022-011 explicitly identifies land use planning and implementation level decision-making as the two levels of decision-making for co-stewardship, whereas the agency here identifies project-level planning as the designated level of co-stewardship. The Agency needs to take appropriate action to ensure that it identifies co-stewardship opportunities at the land planning level as well, such as can incorporating Tribal priorities into the designation and management of resource management areas, and prioritizing agency actions(such as habitat restoration projects) that are proposed by Tribes.

The use of the word "cooperate" is not defined by the document and upon request for clarification, we were directed to Secretarial Order 3403 as the guiding document. If we are to infer the meaning of "cooperate" from other agency usage, this may imply a relationship similar to cooperating agency status, in which the BLM develops projects and plans and then brings them to the third party for input and approval. We do not believe this in the spirit of co-stewardship or the spirit or implications of SO 3403. The addition of the word "collaborate" implies that Tribal voices will be involved from the very beginning, and/or that the agency will consider tribal direction and priorities in its development of land use, projects, and programs. This reflects SO 3403 and the direction provided in its instruction memorandum.

Fish and Wildlife

Needs work:

- Pinyon jay populations and habitat should be managed in accordance with conservation measures based on the best available scientific information.
- Management should focus on specifically *native* habitat for native wildlife, and should prioritize natural processes and techniques.

Alternatives Comparison

Row 87

Adopt the language from Alternatives B/C in the final plan, with the following modification (in italics):

- "Maintain and restore *native* aquatic, avian, and terrestrial wildlife habitat quality and quantity…"

Row 87 Rationale

The Row 86 goal includes management for the benefit of *native* aquatic, avian, and terrestrial wildlife habitats and populations. Row 87 should also explicitly include the focus on native wildlife species to be consistent with the goal of Row 86.

Row 92

Adopt the language from Alternative D in the final plan.

Row 92 Rationale

Alternative D appropriately includes the maintenance, enhancement, and/or restoration of specifically *native* habitat. If the language from Alternative B is included in the final plan (in either Alternative B or C), we request that the language specifically include *native* habitat, as follows: "Maintain and restore *native* habitat through vegetation management or other actions…"

Fish and Wildlife, Note on Appendix C

We are concerned about the lack of any mention of pinyon jay in Appendix C of the DEIS. Pinyon jay is currently proposed for listing under the Endangered Species Act, and is undergoing a 12-month status review by the Fish and Wildlife Service after an initial finding that listing may be warranted. The U.S. Fish & Wildlife Service listed pinyon jay as a *Bird of Conservation Concern* as of 2021 within Bird Conservation Region 16, Southern Rockies/Colorado Plateau, which contains Grand Staircase-Escalante National Monument, as well as in the adjacent Region 9, Great Basin.[4] The Utah Division of Wildlife Resources designated pinyon jay as a *Species of Greatest Conservation Need* (SGCN) in its 2020 changes to the Utah SGCN list, which is part of its Wildlife Action Plan, stating that pinyon jay "is undergoing significant range wide declines."[5] An estimated 85% of the pinyon jay population was lost between 1967 and 2015, and the population is anticipated to decline by another 50% in 19 years.[6] Given the current status of pinyon jays, the species should be considered in Appendix C, and specifically as a special status species. We propose the following additions to Appendix C:

The BLM should add the following to **C.2 Policy and Guidance Documents**, which are part of the best available scientific information regarding pinyon jays, especially as it pertains to management:

[4] *Birds of Conservation Concern 2021*, https://www.fws.gov/migratorybirds/pdf/management/birds-of-conservation-concern-2021.pdf, pp. 21, 27, 29, 31, 42.
[5] *2020 Addendum – Changes to Utah Species of Greatest Conservation Need*, https://wildlife.utah.gov/pdf/WAP/2020-addendum.pdf, pp. 1, 3; see also *Utah's Species of Greatest Conservation Need October 2021*, https://wildlife.utah.gov/pdf/WAP/2021-10-sgcn-list.pdf, p. 1.
[6] Boone JD, Witt C, Ammon EM (2021) Behavior-specific occurrence patterns of Pinyon Jays (*Gymnorhinus cyanocephalus*) in three Great Basin study areas and significance for pinyon-juniper woodland management. *PLoS ONE* 16(1): e0237721. https://doi.org/10.1371/journal.pone.0237621; *Partners in Flight Avian Conservation Assessment Database*, https://pif.birdconservancy.org/avian-conservation-assessment-database-scores/.

- Somershoe, S. G., E. Ammon, J. D. Boone, K. Johnson, M. Darr, C. Witt, and E. Duvuvuei. 2020. Conservation Strategy for the Pinyon Jay (Gymnorhinus cyanocephalus). Partners in Flight Western Working Group and U.S. Fish and Wildlife Service.[7]
- Boone., J.D., S.G. Somershoe, E.M. Ammon, C. Borgman, R. Chi, E. Duvuvuei, S. Gibson, K. Johnson, E. Juarez, E. Masters, R. Norvell, and L. Rossi. 2023. Pinyon Jay Survey Protocol for Landscape Applications. Partners in Flight Western Working Group. 26 p.[8]

Add pinyon jay to the **Species Consideration** column in C.4, and include the following conservation measures, which are based on the best available scientific information:

- Survey all areas where trees will be removed or habitat disturbance will occur, with surveys conducted during pinyon jay nesting season (generally February through May).
    - Rationale: Appendix C uses a prime nesting season of April 1 to July 31 for migratory birds. However, this window is not appropriate for pinyon jays, which nest in February through May.
- Areas will be surveyed even if the tree removal or disturbance will take place outside the nesting season, as pinyon jays can have very high nest site fidelity and may use the same nesting sites across years.
    - Rationale: Marzluff and Balda (1992) documented a flock that bred at the same site each of the 14 years that this flock was observed, and for another flock documented 5 different nesting sites that were each used 9 times.[9] Habitat disturbance outside of the migratory bird nesting period, and even outside of the pinyon jay nesting period specifically, could still result in damaging impacts to pinyon jays and their traditional nesting sites.
- To establish pinyon jay absence, three surveys should be conducted during the nesting season, with each survey separated by at least two weeks.
    - Standard surveys for other birds are not adequate for pinyon jays. See *Pinyon Jay Survey Protocol for Landscape Applications*.[10]
- If pinyon jay nests are found, the breeding colony should be buffered by a 500 meter no-treatment/disturbance zone as recommended by the *Conservation Strategy for the Pinyon Jay* led by the U.S. Fish & Wildlife Service.[11]

---

[7] https://partnersinflight.org/wp-content/uploads/2019/10/Conservation-Strategy-for-Pinyon-Jay_Version-1_February-2020_LowRes.pdf

[8] https://partnersinflight.org/wp-content/uploads/2023/03/Pinyon-Jay-Survey-Protocol-for-Landscape-Applications.pdf

[9] Marzluff, J.M., & Balda, R.P. (1992). *The Pinyon Jay: Behavioral Ecology of a Colonial and Cooperative Corvid*. T & A D Poyser, London, p. 161.

[10] Boone., J.D., S.G. Somershoe, E.M. Ammon, C. Borgman, R. Chi, E. Duvuvuei, S. Gibson, K. Johnson, E. Juarez, E. Masters, R. Norvell, and L. Rossi. 2023. Pinyon Jay Survey Protocol for Landscape Applications. Partners in Flight Western Working Group. 26 p. https://partnersinflight.org/wp-content/uploads/2023/03/Pinyon-Jay-Survey-Protocol-for-Landscape-Applications.pdf

[11] Somershoe, S. G., E. Ammon, J. D. Boone, K. Johnson, M. Darr, C. Witt, and E. Duvuvuei. 2020. Conservation Strategy for the Pinyon Jay (*Gymnorhinus cyanocephalus*). Partners in Flight Western Working Group and U.S. Fish and Wildlife Service. https://partnersinflight.org/wp-content/uploads/2019/10/Conservation-Strategy-for-Pinyon-Jay_Version-1_February-2020_LowRes.pdf

- Rationale: Colony sites can shift up to 500m within the same general area between years, so a 500m buffer allows for these typical colony shifts across years. See *Conservation Strategy for the Pinyon Jay*.

If the BLM does not incorporate these proposals into Appendix C, it must analyze the impacts on pinyon jay of not adopting them.

Special Status Species

Needs work:

- Management for special status species should prioritize natural processes and techniques.
- Mexican spotted owls should be properly protected from new infrastructure and recreational disturbance.

Areas where Monument objects are not protected:

- Discretionary activities that would adversely impact special status species and/or their habitat should be prohibited rather than only avoided.
- Special status plants are provided no specific management actions. The final plan should include specific direction for special status plants, including detail on the protection of known and potential habitats for both special status plants and their pollinators.
- Habitat altering activities within occupied habitat for western yellow-billed cuckoo and southwestern willow flycatcher should be prohibited during the primary breeding/nesting season, and not just avoided.
- All designated critical habitat should be managed as right-of-way exclusion.

Alternatives Comparison

Row 101

Adopt the language from Alternative D in the final plan, with the following modification (in italics):

- "Maintain, enhance, and/or restore native habitat through vegetation management or other actions to support sustainable populations of special status species, prioritizing natural processes and techniques over other metho*ds, and utilizing the best available science for such species*."

Row 101 Rationale

Alternative D prioritizes natural processes and techniques for special status species habitat management over other methods. This could include approaches that attempt to reestablish or mimic natural processes. This is most appropriate for special status species, unless an

alternative approach can be demonstrated to be superior for the species in question based on the best available science. Our proposed addition facilitates flexibility in approach based on the best available science.

Row 105

Adopt the language in Alternative D but omit the exclusion of areas open to ROW.

Row 105 Rationale

If a proposed ROW contains locations or critical habitat for a special status species or, in the case of plants, their pollinators, an alternate location should be found. Proper protection of Monument objects should take precedence over ROWs.

Row 108

Adopt the language from Alternative D in the final plan.

Row 108 Rationale

Mexican spotted owl protected activity centers are relatively small, and infrastructure or facilities should be located outside of PACs. If the language from Alternative B is contemplated for inclusion in the final plan (in either Alternative B or C), the plan must analyze the potential impacts of infrastructure and facilities on Mexican spotted owls throughout the year. Even if development and maintenance of infrastructure and facilities takes place outside the breeding season, such infrastructure and facilities, depending on their nature, could have impacts on Mexican spotted owls during the breeding season and at times other than just during development and maintenance. In addition, we recommend using the language of "built-infrastructure or facilities" from Alternative D, rather than "recreation and administrative facilities" from Alternative B, in the final plan. The language from Alternative D is more general with respect to infrastructure and facilities, and is thus more appropriate. A facility that is not for recreation or administrative purposes would appear to be exempt from the language in Alternative B. The plan should address any infrastructure and facilities in PACs, rather than only those used for specific purposes.

Row 109

Adopt the language from Alternatives B/C/D in the final plan, with the following modification:

- Modify the language in the second clause as follows: "Canyoneering or rappelling within protected activity centers during the breeding/nesting season (March 1 to August 31) requires that participants stay within the canyon bottom and not enter or exit the canyon via canyon walls or other areas that could possibly disrupt breeding/nesting MSO. Rock climbing on canyon walls in PACs is prohibited during the breeding/nesting season."

Row 109 Rationale

This is prudent management direction that allows for discretionary uses while attempting to minimize impacts to breeding/nesting Mexican spotted owls. Our proposed modification applies the same direction to rock climbing as is applied to canyoneering in the current language from Alternatives B/C/D.

Row 110

Adopt the language from Alternative D in the final plan.

Row 110 Rationale

The final plan should prohibit and not just avoid habitat altering activities within occupied habitat for western yellow-billed cuckoo and southwestern willow flycatcher during the primary breeding/nesting season (April 1 to July 1). Due to the rarity of these ESA-listed birds, maximal effort should be made to not disturb their habitat during breeding/nesting. Southwestern willow flycatcher is explicitly called out as a monument object. If the BLM proposes to adopt the language from Alternative A or B/C, it must analyze and justify how such management direction is consistent with the protection of southwestern willow flycatcher habitat as a monument object, and with the ESA protections for both species.

Row 111

Modify the language in the alternative to say: “Allow vegetation management and noncommercial fuelwood harvest by permit with seasonal or breeding restrictions if it protects, restores, and/or enhances habitat for species status *animal* species.” Add another row for special status plants.

Row 111 Rationale

Special status plant species have different requirements. All fuelwood cutting and mechanical vegetation treatments should be surveyed for special status plants. If any are found, a buffer should be demarcated around the population and habitat, and any treatments or cuttings prohibited. In addition, pollinators should be protected by prohibiting insecticides.

Row 112

Adopt the language from Alternative D in the final plan, but stipulate that the determination of whether an activity would “protect, restore, and/or enhance the habitat” must be supported with the best available science.

Row 112 Rationale

Discretionary activities that would adversely impact special status species and/or their habitat should be prohibited rather than only avoided. Both animal and plant special status species are explicitly called out as Monument objects, including rare plants in general. If the BLM proposes

to adopt the language from Alternative A or B/C, it must analyze and justify how such management direction is consistent with the protection of these various species as Monument objects. In addition, what constitutes an activity that would "protect, restore, and/or enhance the habitat" of a special status species is too broad and lacks clarity. Explicitly requiring support from the best available science in the Plan provides necessary sideboards on what a habitat-friendly action is.

Visual Resources

For visual resource management, we support Alternative D, which "would only assign VRM Class I or II objectives to GSENM lands, resulting in all landscapes retaining their landscape character." ES-17. Alternative D best reflects the direction of Proclamation 10286 and the findings of the AMS.

President Biden's Proclamation calls out an array of highly scenic resources and recognizes the public's significant interest in those resources. Similarly, Proclamation No. 6920, 61 Fed. Reg. 50223 (Sept. 18, 1996), notes how special the high, rugged, and remote region is, mentioning how the unspoiled frontier was the last place in the continental United States to be mapped. In turn, the AMS recognizes the "extraordinary visual landscapes with numerous unique areas and features" in the monument and that "[t]he visual resources of GSENM are highly scenic, highly valued by the public, exceedingly undeveloped, and intact." (AMS pgs. 4-3, 5-123). The AMS projects that "it is likely that national and local publics will become increasingly sensitive to changes in the landscape character in GSENM to the degree that sensitivity ratings will shift in some inventoried areas of moderate and low sensitivity." (AMS 5-125). Alternative D provides significantly more protection for visual resources than the other alternatives, including Alternative C, all of which fall short of the proclamation and findings of the AMS. See 2-2, 2-139. Alternative D would, in turn, provide significantly more benefits to the resources of designated scenic routes, wild and scenic rivers, wilderness study areas, and other special designation areas. ES-22 to ES-23.

We strongly oppose Alternatives A and B, which, to varying extents, identify a number of management areas adjacent to Capitol Reef National Park, Glen Canyon National Recreation Area, Bryce Canyon National Park, and scenic backways as Class III or IV. In addition, Alternative A inexplicably identifies former SITLA sections within Wilderness Study Areas (WSA)--now owned and managed by the BLM—as classes different from the surrounding WSA lands. These VRI classifications simply make no sense, are inconsistent with the applicable proclamations, and would clearly harm both Monument objects and resources of the planning area at large, including adjacent national parks. Adopting the VRM classifications proposed in Alternatives A and B would be contrary to applicable law, arbitrary and capricious, and are not appropriate to be carried forward as part of the final plan. *See, e.g.*, FLPMA, 43 U.S.C. § 1782(c); BLM Manual 6330.1.6(C)(4)(d).

Needs work:

- The management direction providing for exceptions to VRM standards for "temporary projects" is entirely undefined and, as a result, too broad. Adding clarity to the scope of what qualifies for the exception is necessary to appropriately protect visual resources.

Alternatives Comparison

Row 120

Adopt the goal from Alternatives B, C, and D in the final plan.

Row 120 Rationale

Protecting the qualities of scenic values is an appropriate goal for management. The language from Alternative A is insufficient to meet the public's interest in protecting visual resources and the agency's obligations under the proclamation.

Row 121

While Alternative A's goal of increasing public awareness and appreciation of and engagement with scenic resources certainly is a worthy one, it is wholly insufficient to guide the monument's management of visual resources and should not distract from the overarching goal of protecting scenic resources, as proposed for Alternatives B, C and D in Row 120.

Row 121 Rationale

The language from Alternative A is insufficient to meet the public's interest in protecting visual resources and the agency's obligations under the proclamation.

Row 123

Adopt allocations in Alternative D, which would assign VRM Class I or II objectives to all GSENM lands.

Row 123 Rationale

As discussed above, Alternatives A and B do not meet the BLM's obligations under the proclamation and other applicable laws, and are based on arbitrary and capricious foundations. Alternative D, on the other hand, best protects the visual resources that are necessary to the proper care and management of Monument objects and best serves the public's strong and growing interest in protecting the monument's visual resources and other objects.

Alternative D is also the only alternative that will protect viewsheds of Bryce Canyon and Capitol Reef National Parks and Glen Canyon National Recreation Area. Alternative A, with VRM Class III and IV within the viewsheds of the national parks "could result in adverse impacts on these NPS landscapes where management activities would be allowed to attract attention of

the casual viewer." 3-242. While smaller in area, Alternatives B and C still include VRM Class III in the viewshed of all three parks and do not ensure that high quality conditions are preserved in areas visible from Bryce Canyon, Capitol Reef and Glen Canyon, as well as viewpoints in the monument.

Row 124

Adopt the management direction for Alternative D, modified by adding the management direction of Alternative B as a secondary standard. In other words, we suggest adopting the following management direction in the final plan: "To the extent practicable, bring existing visual contrasts from past land uses/projects/activities into VRM class conformance; when eliminating visual contrasts is impracticable, reduce existing visual contrasts to the extent practicable through appropriate mitigation measures."

Row 124 Rationale

Bringing existing visual contrasts from past land uses/projects/activities into VRM class conformance–whether in Front Country and Passage Areas or in Outback and Primitive Areas–is most consistent with the goals of the proclamation and national conservation lands, as well as the public's high degree of interest in protecting and improving the visual resources of the monument.

Row 125

Row 125 management direction would provide for exceptions to VRM standards for "temporary projects." We suggest that the final plan direction provide more clarity for the scope of "temporary projects" eligible for the exception. Specifically, we recommend limiting the exception to scientific research projects and traditional cultural practices of Indian Tribes as follows: "The BLM Authorized Officer may allow temporary scientific research projects and traditional cultural practices of Indian Tribes to exceed VRM standards in Class II and III areas if the action terminates within 2 years of initiation. Rehabilitation for all temporary actions that exceed VRM standards will begin at the earlier of the termination of the action or the end of the 2-year period. During temporary actions, the Manager may require phased mitigation to better conform with prescribed VRM objectives."

Row 125 Rationale

While the management direction provides examples of "temporary projects", "such as research projects and meteorological monitoring stations" (Alt. A) or simply "research projects" (Alts. B-D), neither clearly limits such temporary projects to scientific research, potentially leading to inappropriate exceptions to VRM standards, controversy, and conflict. Stated otherwise, Row 125 standards arguably provide no management direction at all (other than excluding permanent projects from its scope). In addition, *all* temporary projects should comply with the

time limitation and mitigation requirements, and mitigation should begin earlier than the end of the 2 year period if the temporary project lasts less than 2 years.

Dark Night Skies

As Proclamation 10286 and the draft RMP/EIS recognize, extraordinary dark night skies are one of the monuments premier natural resources that must be protected. See, e.g., 3-243. For dark night sky management, we support Alternatives C and D, and strongly oppose alternative A. Alternatives C and D would revive management direction to seek International Dark Sky Place status and would include BMPs to protect dark night skies. Alternatives C and D would be the most responsive to existing public concerns for protecting dark night skies, which are expected to continue and increase. 3-245 through 246.

Protects Monument Objects:

- Alternatives C and D include strong measures to manage lighting to protect dark skies.

Needs work:

- The draft plan points to best management practices (BMPs) for controlling standards for dark sky management, but the draft plan does not clearly spell out what those BMPs would be. The draft plan generally states that "Based on the release of BLM Technical Memo 457 (BLM 2023), strategies to reduce light pollution would be applied during planning and design of projects (or other management actions) located on BLM-managed lands both within and outside of GSENM, resulting in protection of GSENM dark night skies." 3-246. "Specifically, outdoor lighting fixtures would only be allowed for public safety with a set of BMPs (see Appendix C) for any new lighting; these BMPs would analyze whether the lighting is necessary, assess lighting's impacts on the adjacent area, focus lighting only where it is needed, limit the brightness of installed lighting, only illuminate fixtures when it is useful, and use warmer-spectrum lighting." 3-247.

  However, in Appendix C, the draft plan merely lists some potential BMPs that *might* apply, noting that there may also be others not listed: "The following documents contain resource conservation measures that the BLM may apply, as appropriate, in project design. As previously noted, this is not an exhaustive list: . . . Five Principles for Responsible Outdoor Lighting (International Dark Sky Association and Illuminating Engineering Society 2020); BLM Technical Note 457, Night Sky and Dark Environments: Best Management Practices for Artificial Light at Night on BLM-managed Lands (BLM 2023)." App. C-1 – C2 (emphasis added). The final plan should clearly identify the BMPs that apply to dark sky management, and those BMPs should be consistent with alternatives C and D, our suggested modifications below, and no less protective than is required for certification as an International Dark Sky Place.

- The alternatives do not adequately address dark sky education and coordination with visitors, adjacent communities and other stakeholders. Incorporating explicit goals, objectives and management direction for education and coordination would strengthen the final plan and set the monument on a stronger course for International Dark Sky Place recognition and long-term protection of the monument's incredible dark sky resources.

Alternatives Comparison

Row 126

Adopt the goal from Alternatives B, C, and D in the final plan.

Row 126 Rationale

The language from Alternative A is insufficient to meet the public's interest in protecting dark night skies and the agency's obligations under the proclamation.

Row 127

Adopt the goal from Alternative A in the final plan.

Row 127 Rationale

While Alternative C and D provide appropriate direction for management actions within the monument, we urge that, in addition, the final RMP include a goal to encourage collaboration with adjacent landowners, communities, and visitors to prevent light and other activities outside the monument from degrading the dark night sky resources within the monument. As the draft recognizes, "With increasing development throughout the western United States, it is anticipated that light pollution will continue to increase in the periphery of GSENM with further encroachment of light pollution into the edges of GSENM." 3-245. While the draft RMP eschews any BLM actions to restrict or prohibit lighting on non-BLM-managed lands outside GSENM, a collaborative approach with adjacent landowners and communities, including robust education, would be an appropriate way to address public concerns for protecting dark night skies within the monument. "Protection of dark night skies is most successful as a result of coordination with federal, state, county, tribal, and local partners." F-25. Increasing public awareness and appreciation of and engagement with night sky resources, while alone insufficient to meet BLM's obligations to protect dark night skies, should nevertheless be a goal of the final RMP. We note that while BLM Technical Note 457 suggests a best management practice of educating stakeholders concerning night sky and darkness resources and Dark Sky Sanctuaries, for example, are expected to provide ample external communications and educational opportunities to interact with its visitors, incorporating an explicit goal for education and coordination would not only help guide the BLM in its dark sky management, it also would help stakeholders engage in the effort.

Row 128

Adopt the objective from Alternatives B, C, and D in the final plan, modified to include language from Alternative A: "Manage, monitor, and periodically inventory outdoor lighting fixtures to protect the quality of dark night skies and other GSENM objects *in partnership with local communities, Tribes, universities, other agencies, and stakeholders."* Both monitoring/ inventory *and* management to protect dark skies and other GSENM objects is important.

Row 128 Rationale

While it is important to monitor lighting and periodically update the inventory for dark skies, the objective from Alternative A is insufficient to meet the public's interest in protecting dark night skies and the agency's obligations under the proclamation.

The Colorado Plateau is one of the last sanctuaries of darkness amidst a rising surge of light pollution with one of the highest concentrations of Dark Sky Places designated by the International Dark Sky Association in the world. Circling GSENM, Capitol Reef, Zion and Bryce Canyon National Parks, Pipe Springs and Cedar Breaks National Monuments and Kodachrome Basin State Park are all designated International Dark Sky Parks, a designation reserved for parks with "exceptional" (see International Dark Sky Places, available at https://www.darksky.org/our-work/conservation/idsp/) and well-preserved night sky resources. Torrey is an International Dark Sky Community recognized for adopting "quality outdoor lighting ordinances" *Id*. and educating their residents about the importance of dark skies. Rainbow Bridge National Monument is a designated International Dark Sky Sanctuary, "the first of its kind in the National Park Service, and distinguishes Rainbow Bridge National Monument for the quality of its naturally dark night skies and the site's cultural heritage." *Id*. The Kaibab Paiute Tribe earned a designation as the first "dark sky nation" in the world and the Kaibab Paiute reservation is and International Dark Sky Community known as the "Thunder Mountain Pootsee Nightsky." (*see* Dark Sky over Thunder Mountain Pootsee Nightsky, available at https://www.intermountainhistories.org/items/show/542). The Colorado Plateau, with GSENM at its heart, provides unparalleled opportunities for cross-jurisdictional partnerships to protect the purity of dark night skies in the monument.

Row 129

Modify the language from Alternative D in the final plan to make clear that only outdoor lighting fixtures *that are necessary to protect* public health safety would be permitted: "Allow outdoor lighting fixtures and use only where and when necessary to protect public health and safety, adhering to the BMPs identified in Appendix C. Where possible, remove, replace, retrofit or manage existing exterior artificial light fixtures to meet BMPs."

Row 129 Rationale

While the meaning of the management direction for Alternatives C and D would seem to be identical in practice, neither provides sufficient clarity in direction on what lighting should qualify for "public health and safety." In addition, the management direction should make clear that any outdoor lighting that is necessary for public health and safety should be managed to ensure that it is illuminated only *when* it is necessary.

Row 130

Adopt the language from Alternatives B, C, and D in the final plan.

Row 130 Rationale

The language from Alternative A is insufficient to meet the public's interest in protecting dark night skies and to provide for a more detailed planning process for dark night sky protection.

Natural Soundscapes

Proclamation 10286 recognizes that "The Grand Staircase-Escalante area also provides a remarkable natural soundscape with infrequent human-caused sounds. From popular recreational destinations to remote, isolated locations, acoustic baseline research has found that some of the quietest conditions found in protected areas across the United States can be found in the Grand Staircase-Escalante landscape." Protection of natural quiet, a monument object and value, requires plan direction designed to limit human-caused noise from allowed uses and actions.

Needs work:

- The final plan should include management direction for the development of a soundscape management plan that complies with the management direction in Alternative D, while also including provisions for periodic inventories of, monitoring of, and increasing public awareness and appreciation of and engagement with, natural soundscape resources.

Alternatives Comparison

Row 131

Adopt the goal for Alternatives B, C, and D.

Row 131 Rationale

The language of the proclamation, other applicable law, and BLM policy, as noted in our scoping comments, requires the BLM to protect the quality of natural soundscapes. That necessarily includes a requirement to manage sound-producing uses to avoid and minimize

sound that interferes with the quality of the natural soundscapes, which is recognized as an objective in Row 133.

Row 132

Adopt the goal of Alternative A or incorporate increasing public awareness and appreciation of and engagement with natural soundscape resources elsewhere in the plan direction (as discussed below).

Row 132 Rationale

Increasing public awareness and appreciation of and engagement with natural soundscape resources should be an important part of the BLM's plan for achieving the goal of protecting the quality of the monument's natural soundscapes. Perhaps implicit in the absence of this goal under Alternatives B, C, and D is a recognition that such awareness, appreciation, and engagement need not be a goal in-and-of-itself, but regardless, it should be explicitly incorporated into the plan direction.

Row 133

Adopt the objective for Alternatives B, C and D.

Row 133 Rationale

As described above, managing uses to protect the natural quiet associated with GSENM's soundscapes is a necessary and appropriate objective for protecting the quality of the monument's natural soundscapes.

Row 134

Adopt the management direction for Alternative A, modified to make clear that the soundscape management plan must include components aimed at increasing public awareness and appreciation of and engagement with natural soundscape resources (Row 132); continuing to inventory and monitor natural soundscapes in partnership with local communities, universities, other agencies, and stakeholders (Row 133); and establishing quiet hours at campgrounds, designated camping locations, and other locations (Row 136). Alternative A should also be modified to include the following language from the 2000 MMP - Studies will be coordinated for areas that border adjacent National Parks.

Row 134 Rationale

Developing a natural soundscape management plan is a critical strategy for achieving the goal of protecting the quality of the monument's natural soundscapes and should be incorporated into the final plan. As discussed above, actions to increase public awareness and appreciation of and engagement with natural soundscape resources, continuing to inventory and monitor natural soundscapes in partnership with local communities, universities, other agencies, and

stakeholders, and establishing quiet hours would be critical and complementary components of that plan.

Cross boundary coordination between agencies in inventory and monitoring, education and management is critical to ensuring the protection of natural quiet in the monument and adjacent parks. NPS strives to "preserve, to the greatest extent possible, the natural soundscapes of parks." "In and adjacent to parks, the Service will monitor human activities that generate noise that adversely affects park soundscapes, including noise caused by mechanical or electronic devices." NPS, Soundscape Management Policy 4.9 (2006) available at https://www.nps.gov/subjects/sound/soundscape-management-policy_4-9.htm.

Row 135

Adopt the management direction for Alternative D.

Row 135 Rationale

The management direction for Alternative D is most consistent with protecting the quality of the natural soundscapes and other objects identified by the proclamation, and are reasonable and attainable. The other alternatives, and especially Alternative A, are insufficient to achieve that goal and applicable mandates, and are insufficient to protect the natural quiet in national parks in areas adjacent to passage and outback areas in the monument.

Row 136

Adopt the management direction for Alternatives B, C and D (or incorporate the establishment of quiet hours elsewhere into the plan's management direction).

Row 136 Rationale

Establishing quiet hours at campgrounds, designated camping locations, and other locations is a routine–even expected–management action that not only helps protect natural soundscapes, but improves visitor experiences and protects wildlife. As with other components of the natural soundscapes alternatives matrix, establishing quiet hours should be a necessary component of a soundscape management plan.

Fire Management

Protects Monument Objects:

- Responding to wildland fires based on the ecological importance of fire as a natural disturbance regime, and when possible, allowing it to function in its natural ecological role.

Needs work:

- When seeking to restore landscapes after wildland fire, aim to restore native functional vegetative communities.
- Recognize that restoration may be active or passive, and may require the modification of discretionary uses.

Areas where Monument objects are not protected:

- Landscape-scale ecosystem restoration projects should seek to restore specifically *native* functional vegetative communities, with a prioritization of natural processes and techniques.
- Any seeding done to restore functional vegetative communities, as part of a post-fire project, should be limited to native species or, if absolutely necessary in emergency stabilization projects, short-lived, non-persistent non-native species.

Alternatives Comparison

Row 137

Adopt the language from Alternatives B/C/D in the final plan.

Row 137 Rationale

Managing wildland fires as a natural disturbance regime is an appropriate goal for GSENM. The disruption of historical fire regimes since European settlement has had significant impacts on the landscape, many of which are negative. A goal that focuses on the ecological importance of fire could help restore the role of fire on the landscape and turn back some of the negative impacts of altered fire regimes. Protecting life and property as part of this goal is of course important.

Row 139

Adopt the language from Alternatives A/B/C/D in the final plan.

Row 139 Rationale

Along the same lines as what is stated directly above, allowing natural caused wildland fire to function in its natural ecological role is both appropriate for GSENM and could help turn back some of the negative impacts of altered fire regimes since European settlement.

Row 140

Adopt the language from Alternatives B/C/D in the final plan, with the following modification (strikeout and italics):

- Rehabilitate and restore landscapes after wildland fire~~, as appropriate for site management goals.~~ *with the aim of restoring native functional vegetative communities*.

Row 140 Rationale

The explicit aim of restoring native functional vegetative communities is appropriate for GSENM, and ensures that the language in this objective is consistent with other goals and management direction for Fire Management.

Row 141

Adopt the language from Alternatives B/C/D in the final plan, and include the following addition:

- Restoration may be active or passive, and may require the modification of discretionary uses.

Row 141 Rationale

The plan should clarify that restoration can be active or passive. Restoring ecosystems functioning outside their historical range should involve an identification of the drivers of departure from the historical range. If discretionary uses are among the drivers of departure from the historical range, those uses may need to be modified to achieve restoration goals.

Row 143

Adopt the language from Alternative D in the final plan, with the following modifications:

- Implement landscape-scale ecosystem restoration projects to restore native functional vegetative communities, with a prioritization of natural processes and techniques *(such as wildland fire)* over other methods. *To restore native functional vegetative communities, seeding will be limited to native species and short-lived, non-persistent non-native species if needed for emergency stabilization and restoration projects.* (modifications in italics)

Row 143 Rationale

Given that seeding is a common practice in restoration projects, the plan should be explicit about the approach to seeding as part of these projects. Limiting seeding to native species and short-lived, non-persistent non-natives (including the use of sterile species) if absolutely needed following fire or for another emergency stabilization reason, is likely to be most successful in restoring native functional vegetative communities. The use of long-lived and/or persistent non-native species is likely to have cascading impacts throughout the ecosystem, such as to soils, hydrology, pollinators, and bird assemblages, and to convert the site to a novel ecological state that is likely to persist long into the future. Seeding long-lived/persistent non-

natives as a general, plan-level approach would require a hard look at the associated environmental effects.

Row 145

Adopt the language from Alternative D in the final plan, and include the following addition:

- To restore native ecosystems, seeding will be limited to native species and short-lived, non-persistent non-native species, if needed in emergency stabilization and restoration projects.

Row 145 Rationale

We appreciate that Alternatives B, C, and D include the direction to restore *native* ecosystems. Undertaking actions "as appropriate for site management goals" (Alternatives B/C) is vague; "prioritizing natural processes over other methods" (Alternative D) is likely to better protect and restore GSENM objects, including relict vegetative communities and pinyon-juniper woodlands. Given that seeding is a common practice in post-fire stabilization, rehabilitation, and restoration, the plan should be explicit about the approach to seeding as part of these projects. Limiting seeding to native species and short-lived, non-persistent non-natives (including the use of sterile species) if absolutely needed following fire or for another emergency stabilization reason, is likely to be most successful in restoring native functional vegetative communities. The use of long-lived and/or persistent non-native species is likely to have cascading impacts throughout the ecosystem, such as to soils, hydrology, pollinators, and bird assemblages, and to convert the site to a novel ecological state that is likely to persist long into the future. Seeding long-lived/persistent non-natives as a general, plan-level approach would require a hard look at the associated environmental effects.

Lands with Wilderness Characteristics

Protects Monument Objects:

- 190,100 acres of BLM-identified lands with wilderness characteristics (LWC) managed to protect wilderness characteristics (size, naturalness, solitude, and opportunities for primitive and unconfined recreation).
- Within this, 5,445 acres of former SITLA sections surrounded by WSAs within GSENM were properly inventoried as potential LWC in the EIS and are to be managed for the protection of wilderness characteristics.

Needs work:

- There are errors in BLM's DEIS maps and corresponding GIS shapefiles that do not conform with the DEIS' plain text on LWC. For example, Alternative C states that "all wilderness characteristics in the primitive area would be managed to protect those

characteristics…" However, both maps in the DEIS for Alt. C and GIS data shows that there were many areas within the "primitive" management area in Alt C. where BLM does not plan to manage LWC for protection of wilderness characteristics. There are many locations throughout the Monument, but, for example, almost the entire Warm Springs LWC unit is not managed for protection of wilderness character despite occurring within the Primitive management area.

Areas where Monument objects are not protected:

- Alternative C, as well as A and B, elect not to manage a majority of BLM-identified LWC for protection of their wilderness characteristics. In C, the preferred alternative, 369,500 acres of BLM-identified LWC would be managed to either not protect wilderness characteristics or to "minimize impact" to wilderness characteristics, although BLM identifies the only objective, quantifiable measure of this "minimize impact" standard as relating to adequate unit size ("Allow developments [in LWC] only if it will not diminish the total acres required to maintain lands with wilderness characteristics"), presumably not holding any standards of minimization or protection until a unit reaches its absolute acreage floor of 5,000 acres. This is extremely discretionary on the part of BLM and gives no assurances that this standard will adequately protect Monument objects and resources.

- In this DEIS process, BLM completely failed to re-inventory, amend, or otherwise address existing deficient and illegal LWC inventories (from 2018/2019 planning process) that were pointed out during scoping, and for which new information was provided by the public during this phase of the plan revision. These specific inventory units were highlighted as needing to be addressed for proper compliance with BLM Manual 6310, for lack of any existing inventory at all, for using arbitrary boundaries, or ignoring adjoining Wilderness, WSAs, or recommended wilderness in NPS units. Failing to correctly inventory these units (listed at length with explanations of deficiencies in our Scoping Comments) at all during the current plan revision process does not adequately protect the Monument objects and resources contained throughout these improperly-inventoried units, such as scenic values, primitive recreation, wildlife habitat and connectivity, relict plant communities, and cultural and historic resources, all of which may be harmed if BLM fails to protect or even to take the required hard look at wilderness characteristics in these areas, as required by FLPMA and BLM regulations. 43 U.S.C. § 1711(a); BLM Manual 6310.04(C0(1) (Wilderness inventories are to be done on a continuing basis and relevant citizen-submitted data is to be evaluated.)

Alternatives Comparison

Row 148

Adopt the language from Alternative C in the final plan, but modify it as a combination of Alternative C and D thus: Manage LWC in the *primitive and outback* areas to protect lands with wilderness characteristics while providing for compatible uses, manage LWC in the passage area to minimize impacts on wilderness characteristics while providing for compatible uses that are consistent with the protection of GSENM objects, and manage LWC in frontcountry areas for other compatible uses while not protecting wilderness characteristics.

Row 148 Rationale

The goal of choosing where and how to manage BLM-identified LWC should be protecting existing site integrity, identifying area manageability and prioritizing consistency across units adjacent to and adjoining other areas with wilderness characteristics (such as WSAs, Wilderness, neighboring NPS units). As proposed currently in Alternative C, management of LWC units, even within the same unit, is inconsistent and arbitrary on a map, as well as often having mapping errors that do not match BLM's narrative description of the units and their management levels. For example, in Alternative C, Figure 2-8 in Appendix A, there are several LWC units in the primitive area that would NOT be managed to protect LWC, despite the DEIS' assertion that "all lands with wilderness characteristics in the primitive area would be managed to protect those characteristics." See Appendix D, Fig. LWC-1. According to BLM's GIS data, approximately 74,714 acres of BLM-identified LWC within the Primitive zone appears to have been overlooked for management to protect wilderness characteristics. This may just be a mapping error, but it demonstrates the inconsistency and arbitrariness in management decisions for LWC which, looking at the Map for Alt C, have nothing to do with manageability.

In Alt C, there are LWC units and portions of units completely unbound by designated routes or other qualifying inventory boundaries that are bisected into two different management classes, or that are entirely surrounded by a WSA yet BLM has elected not to manage these units for the protection of wilderness characteristics and has put them in the "outback" rather than the "primitive" zone. Several examples of units where failing to manage for protection of LWC is inconsistent with surrounding management for wilderness characteristics are the Wahweap-Death Ridge/ Mud Spring Canyon Units, Little Egypt, large portions of the Paria-Hackberry LWC unit at Calf Pasture Point, No Mans Mesa, and Deer Spring Point area in the White Cliffs. There are even units that BLM in Alt C is electing not to manage for protection of wilderness characteristics that are completely contiguous to designated Wilderness Areas, such as the Paria Canyon C LWC unit adjoining the Paria Canyon-Vermillion Cliffs Wilderness Area. *See* Appendix D, Fig. LWC-2.

Because it is ultimately unclear how BLM determined which areas in Alt C fell into which management areas (Primitive, Outback, Passage, or Frontcountry) (*see supra* "Management Areas") and BLM seems to have based its LWC-management prescriptions in the same Alternative on these area designations, the reason some units were managed for protection of LWC while others were not is inconsistent, unclear, and does not make for good management and clarity on the ground. For this reason, Monument objects and resources which are protected by preserving wilderness character where it exists in these important NLCS lands are at risk under Alt C as currently proposed.

However, a simple remedy to this inconsistency and arbitrary determinations of where and how LWC is managed to protect wilderness characteristics—without BLM needing to return to the drawing board completely on where area designations occur in Alt C—is for BLM to manage units within both the primitive and outback areas for protection of LWC, to manage portions of LWC units within the passage area (where more disturbance can be expected to occur and where impacts to LWC are not likely to disqualify a unit for size issues) to minimize impacts to LWC, and then, as currently planned in Alt C, to continue to manage LWC in the frontcountry area for discretionary use while not protecting LWC. This protects overall unit integrity, the highest-quality units where solitude, naturalness, and opportunities for primitive and unconfined recreation are abundant, and adds predictability and consistency on the ground to BLM's management of the Monument.

Row 149

Adopt the language from Alternatives B-D with the following addition to the final two bullet points:

- "Allow vegetation management and restoration that enhances and preserves wilderness characteristics, *ensuring native species reoccupy habitat with the frequency, diversity, density, age classes, and productivity expected for this habitat at its natural ecological potential. Manual methods will be the primary method of treatment, with no surface-disturbing mechanical methods permitted. Seed mixes, if required, will be composed of native seed, preferably from locally-adapted variants.*
- "Restrict construction of new structures and facilities unrelated to the preservation or enhancement of wilderness characteristics or necessary for the management of existing uses *that are consistent and compatible with the protection of Monument resources.*

Row 149 Rationale

This addition to BLM's management criteria for LWC units managed to protect wilderness character both best protects wilderness characteristics and Monument objects and resources within LWC units and ensures that Monument objects like relict vegetation, soils, cultural resources, and ancient pinyon-juniper communities are enhanced and preserved alongside

wilderness characteristics like solitude, naturalness, and opportunities for primitive and unconfined recreation. These additions limit subjective management discretion enough that there are consistent standards to apply and not left up to interpretation on a case-by-case basis which makes planning and management unpredictable and opaque to both land managers and the public.

Row 150

Adopt the language from Alternative C with the following modification: "Manage lands with wilderness characteristics managed to minimize impacts on wilderness characteristics while allowing compatible uses that do not adversely impact GSENM objects and resources as follows: • Allow developments only if it will not diminish the total acres required to maintain lands with wilderness characteristics *and if consistent with the protection of Monument objects and resources."*

Row 150 Rationale

Same as rationale for Row 149.

Add New Row 1

BLM shall update and maintain an inventory of all areas within the Monument that contain wilderness characteristics, including updating and revising its prior inventories from the 2018/ 2019 Monument Planning process in compliance with FLPMA and BLM Manual 6310 within one year of final plan approval, and shall not conduct or approve any potentially impairing site-specific activities in these inventory units before these updates and revisions are completed. *See* Appendix D and attached GIS shapefiles for LWC inventory units.

New Row 1 Rationale

BLM Manual 6310.06(A) Manual 6320 requires BLM to consider lands with wilderness characteristics in land use planning, both in evaluating the impacts of management alternatives on lands with wilderness characteristics and in evaluating alternatives that would protect those values. Wilderness inventories are to be done on a continuing basis and relevant citizen-submitted data is to be evaluated. BLM Manual 6310.04(C)(1).

As discussed previously, although BLM completed new LWC inventories for erroneously-excluded former-SITLA parcels within WSAs during this DEIS and plan revision process, BLM failed to consider new information provided during scoping by the public about deficiencies in its previous inventory for dozens of units within the Monument. These units were inventoried in a manner that was largely legally flawed, appeared to have several predetermined outcomes, and often simply did not correctly apply LWC inventory procedure as articulated in BLM Manual 6310, which sets forth the agency's policy for conducting wilderness characteristics inventory on BLM lands. These deficiencies were explained in detail in our scoping comments in 2022

during the current plan process (Scoping Comments at 102-106), and are explained here again in detail in Appendix D. We are also including accompanying GIS shapefiles for these units to assist BLM in remedying its current nonexistent or insufficient inventories.

By failing to properly inventory LWC units under FLPMA and Manual 6310 and failing to respond to new information provided during the land-use planning process, BLM has not taken an adequate hard look at lands with wilderness characteristics in the current NEPA process.

BLM must commit in the GSENM plan text to properly completing and updating these inventories and establishing appropriate management provisions, at a minimum, before conducting or approving any site-specific activities in any of these areas that may have the potential to impact wilderness characteristics that were improperly inventoried, and at least within one year following final plan approval. *See* Appendix D and attached GIS shapefiles for LWC inventory units in need of review or re-evaluation.

Forestry and Woodland Products

Protects Monument Objects:

- The shared objective for alternatives B-D to maintain and restore forest and woodland health to protect watershed values, support wildlife habitat requirements, and reduce the potential for catastrophic wildfires.
- Alternative C's prohibition of commercial harvesting within the monument, designated route limitations (no cross-country travel) for non-commercial harvesting, and the protection of old-growth and mature trees (live or dead).

Needs work:

- The term “old-growth trees” should be defined in the final plan.
- The final plan should include examples of measures that may be taken for old-growth tree retention.

Areas where Monument objects are not protected:

- Non-commercial wood-harvesting has a high potential to harm Monument objects including, but not limited to, biological soil crusts. In light of this, Non-commercial harvesting should only be permitted to tribal communities for traditional uses prior to site-specific analysis determining the protection of GSENM objects.

Alternatives Comparison

Row 159

Adopt management direction in Alternatives B-D.

Row 159 Rationale

We support the shared management direction for Alternatives B-D to prohibit commercial harvesting within the Monument. Alternative A not only allows for commercial harvesting within the monument, is lenient on the locations and types of harvesting that may occur. Alternative A is an inappropriate management direction for a National Monument, and would not ensure proper protection of GSENM objects.

Row 160

Adopt the language from alternative D in the plan with the following additions:

> "Prohibit noncommercial harvest of forestry and woodland products unless it furthers the protection of GSENM objects. *If analyzed and determined to protect GSENM objects, noncommercial harvest will be permitted by tribal communities for traditional uses. For safety reasons, trees that physically block designated vehicle routes may be removed."* [*Emphasis* added to additions].

Row 160 rationale

Non-commercial harvesting of forestry and woodland products has a high likelihood of causing harm to Monument objects including biological soil crusts, rare endemic plant species, as well as habitat for imperiled species such as Pinyon Jays. Even dead wood is ecologically important to the Monument. In addition to its habitat function, it has been recognized that dead wood plays important roles in carbon, nutrient, and hydrological cycles and is a key structural component influencing ecosystem processes such as erosion.

Row 161

Adopt the language from Alternatives B-D, with the addition of an explicit definition of old-growth pinyon and juniper trees as follows:

A minimum large tree diameter (at root collar) of 9" with a corresponding 150 year tree age for low productivity sites and a minimum 12" tree diameter (at root collar) with a corresponding 200 year tree age in high productivity sites (with a corresponding minimum large tree age of 200 years; p. 39).

Row 161 Rationale

We appreciate a management direction which recognizes the importance of retaining old-growth and mature trees within the Monument; however, the terms "old-growth trees" and "mature trees" should be defined in the final plan.

President Biden's executive order**,** "Strengthening the Nation's Forests, Communities, and Local Economies,'' calls for the conservation and restoration of these forests, recognizing the critical

roles that old-growth trees play in conserving biodiversity and fostering resilience in the face of a changing climate. (Executive Order 14072). The EO directed the Secretaries of the Interior and Agriculture to define, identify, and complete an inventory of old-growth and mature forests on Federal lands. This direction was fulfilled in April 2023 with the issuance, by both agencies, of the "Mature and Old-Growth Forest Report." Appendix 1 of the report provides old-growth working definitions for Forest Service regions. Table 11 provides minimum old-growth criteria for the Intermountain Region (Region 4). For old-growth pinyon and juniper in the southeastern part of the region, which includes the GSENM, the minimum large tree diameter (at root collar) is 9" for low productivity sites (with a corresponding minimum large tree age of 150 years) and 12" for high productivity sites (with a corresponding minimum large tree age of 200 years; p. 39). (USDA and USDI. 2023) This should be used as the standard. Anything outside of this framework must be justified through tree-aging.

Considering that pinyon and juniper species would be the target trees for any tree-related vegetation removal projects, we thank the agency for considering this addition and strongly support its inclusion in the final plan to protect old-growth pinyon-juniper woodlands, which are a specific Monument object identified in Proclamation 6920.

Row 162

Include the language from Alternative A only if the following modification is included:

> "Permit harvesting of woodland products in riparian areas *only for Native American traditional purposes as determined on a site-specific basis*." [*Emphasis* added to modification].

Row 162 Rationale

Exclude floodplains, riparian, and aquatic areas from woodland product use except for Tribal traditional uses. It is important to stay consistent within the DEIS, and therefore it is important to give Tribes access to riparian woody products. The stated goal of Row 68 in the DEIS is to, "Honor Tribal Nation's stewardship, interests, and uses of GSENM," which include woody riparian uses.

Row 163

Adopt the language from Alternatives B-D, and include the process that will determine whether the collection and removal of vegetation residues will optimize restoration of ecosystem health.

Row 163 Rationale

We support that the management direction for Alternatives B-D will prioritize the use of residues on-site or for other GSENM restoration activities and that residues will only be removed if it will optimize the site's restoration potential. Woody debris retained following management activities should be at levels supportive of site potential ground cover. We

recommend that there be a process of determination that is made available to the public when making the decision to leave or take residues. Our concern is around the methods of removal, which could lead to further degradation of the site. It is important that the decision process include an analysis of the methods of removal and how removal may ultimately affect the area.

Row 164

Include the language from Alternatives B-D in the final plan.

Row 164 Rationale

We support this management as it provides important resources for restoration purposes within the Monument.

Livestock Grazing

Protects Monument Objects:

- Allocation of the areas in Alternatives A, B, and C as unavailable for livestock grazing.
- BLM's approach to the implementation of grazing permit relinquishments.
- Prohibition of nonstructural range improvements with a primary purpose of increasing forage for livestock.

Needs work:

- Regarding drought management, include specific decision thresholds prescribing management actions based on the U.S. Drought Monitor.

Areas where Monument objects are not protected:

- BLM should allocate the following areas in Alternative D as unavailable for livestock grazing in order to properly protect Monument objects:
    - Boulder Creek allotment
    - Circle Cliffs allotment, Gulch and Lampstand pastures
    - Cottonwood allotment, Paria River, Paria Box, and Gravelly Hills pastures
    - Headwaters allotment:
        - Fourmile Canyon from Fourmile Water to Tommy Canyon
        - Halfmile Canyon from its head to Tommy Canyon
    - King Bench allotment, King Bench and Durffey Mesa pastures
    - Lower Hackberry allotment, Hackberry Canyon
    - Upper Hackberry allotment, Hackberry Canyon and Round Valley Draw narrows
    - Upper Paria allotment:
        - Upper River pasture
        - Henrieville Creek from near the confluence of Shurtz Bush Creek to approximately (37.592070, -111.929305), where the canyon widens

- BLM Utah Rangeland Health Standards are not sufficient to ensure the proper protection of GSENM objects. The BLM should implement a protocol for ensuring that livestock grazing is consistent with the protection of GSENM objects, on top of meeting BLM Utah Rangeland Health Standards.
- Feral cows should be removed within 2 years of discovery in order to protect Monument objects.

Alternatives Comparison

Row 167

Adopt the language from Alternatives B/C/D in the final plan.

We agree with this objective but find that current Rangeland Health Standard assessment methods fail to adequately identify impairment of Monument objects and current management guidelines fail to call for actions necessary to ensure their protection and restoration in a timely period. As described below, using a Monument objects-based approach to managing grazing requires additional closures and other significant changes in management direction.

Row 167 Rationale

Proclamation 10286 instructs the Secretary to manage livestock grazing "consistent with the care and management of the objects identified above and in Proclamation 6920." The language from Alternatives B/C/D explicitly includes managing livestock grazing in a manner that is consistent with the protection of GSENM objects. Thus, in order to implement this direction from Proclamation 10286, the language from Alternatives B/C/D should be adopted in the final plan.

In this context we want to highlight that meeting BLM Utah Rangeland Health Standards is not coextensive with, and does not substitute for, an analysis that addresses harm to Monument objects, and therefore is not sufficient to ensure the proper protection of all GSENM objects. The BLM should implement a protocol for ensuring that livestock grazing is consistent with the protection of GSENM objects, on top of meeting BLM Rangeland Health Standards.

First and foremost, BLM regulations require that livestock grazing complies with the fundamentals of rangeland health on every allotment across all BLM lands. If BLM only acts when grazing is not meeting the fundamentals of rangeland health, this is not sufficient to ensure that grazing is consistent with the protection of Monument objects, and would provide the Monument and its objects with no greater protection than BLM land anywhere else. The Proclamation requires that BLM must not simply treat Monument lands the same as every other piece of BLM land when it comes to livestock grazing.

Second, the fundamentals of rangeland health, and Utah's standards and guidelines, are almost exclusively ecological. They do not address archeological, paleontological, historical, scenic, tribal, or other values (and objects) the Monument proclamation identifies. As the DEIS states, and other studies confirm, livestock grazing causes irreparable harm to archaeological resources. See rationale for Row 65 for a summary of livestock impacts to archaeological resources.

Third, there are wildlife and animal-related values that the Monument proclamation protects, but for which it is unclear that the fundamentals, standards, and guidelines directly address. For example, the Proclamation specifically identifies insects, including endemic bees, as Monument objects ("hundreds of bee species, including dozens of species that are believed to be unique to this landscape"), as well as "mountain lion, bear, pronghorn, and desert bighorn sheep, [and] hundreds of species of birds." Rangeland health standards address the maintenance and restoration of "habitats" for "special status species," but it is unclear whether endemic bees, or hundreds of bird species would meet that definition.

Fourth, it is unclear whether the grazing standards and guidelines offer the same protection for soil-related values as the Proclamation. BLM's rangeland health determinations for GSENM allotments indicate biological soil crusts are an optional indicator. But the Monument proclamation clearly establishes that protection of soil resources is required, not optional. It identifies as objects to be protected "unusual and diverse soils that support communities of mosses, lichens, and cyanobacteria," and "unusual and diverse soils, including desert pavement and biological soil crusts, which support a wide range of vegetative communities, such as relict plant communities that have existed since the Pleistocene, and a multitude of endemic plants and pollinators." The 17 indicators in the upland rangeland health assessment Technical Reference do not include biological soil crusts. There is an option to add another indicator and BLM is to be given credit because they added biological soil crusts as an 18th indicator in their 2000-2005 rangeland health surveys. However, because of the "preponderance of evidence" and the need for a high number of assessment sites to fail standards for an allotment to fail standards, the widespread problems with biological soil crusts in the monument were not identified using Rangeland Health Standards assessments. This reinforces the inadequacy of Rangeland Health Standards for protecting Monument objects.

Fifth, Rangeland Health Standards require that standards and guidelines ensure that the agency is making "significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components," as well as making "significant progress" toward attaining ecological processes and "meeting wildlife needs." But the Monument Proclamation does not require that the agency "make significant progress" toward protecting Monument objects; it requires "protecting" the objects. The Antiquities Act similarly addresses

the "proper care and management of the objects to be protected." 54 U.S.C. § 320301(b). Therefore, it is again unclear how BLM can rely on compliance with rangeland health fundamentals, or assessments that evaluate rangeland health, as proxies for assessing livestock grazing's impacts to, or to understand whether grazing is undermining the protection of, Monument objects. We do not believe it can do so, and must instead evaluate livestock grazing's impact to Monument objects as an independent evaluation.

Finally, if an allotment is found to be failing Rangeland Health Standards, and attempts at progress are made, the process does not ensure that Monument objects will be restored and protected as a result of actions taken, even if some progress is made towards meeting standards. The process is not designed to restore and protect Monument objects. For the reasons listed above, meeting Rangeland Health Standards is not sufficient to ensure the proper protection of GSENM objects. The BLM needs to implement a protocol for ensuring that livestock grazing is consistent with the protection of GSENM objects, on top of meeting BLM Rangeland Health Standards.

Row 172

Allocate the following areas as unavailable for livestock grazing:

- All areas identified as unavailable in Alternatives A, B, and C.
- The following areas included in Alternative D:
    - Boulder Creek allotment
    - Circle Cliffs allotment, Gulch and Lampstand pastures
    - Cottonwood allotment, Paria River, Paria Box, and Gravelly Hills pastures
    - Headwaters allotment:
        - Fourmile Canyon from Fourmile Water to Tommy Canyon
        - Halfmile Canyon from its head to Tommy Canyon
    - King Bench allotment, King Bench and Durffey Mesa pastures
    - Lower Hackberry allotment, Hackberry Canyon
    - Upper Hackberry allotment, Hackberry Canyon and Round Valley Draw narrows
    - Upper Paria allotment:
        - Upper River pasture
        - Henrieville Creek from near the confluence of Shurtz Bush Creek to approximately (37.592070, -111.929305), where the canyon widens

Add the following language: "To the extent there is currently grazing on these allotments BLM will assess whether it should be decreased in accordance with 43 C.F.R. § 4110.3-2 (2005) until closures are completed. If grazing continues until closures are completed, utilization will be limited to 30% in order to protect Monument objects."

Row 172 Rationale

Proclamation 10286 instructs the Secretary to manage livestock grazing "consistent with the care and management of the objects identified above and in Proclamation 6920." The stated objective of Row 167 explicitly includes managing livestock grazing in a manner that is consistent with the protection of GSENM objects. In order to conform with NLCS guidance and Proclamation 10286, the following areas should be made unavailable for grazing in the final plan in order to properly protect Monument objects. These closures are ones we have determined are particularly important to prevent degradation of specific Monument objects such as canyon bottom plant communities, wildlife habitat, and biological soil crusts. While additional closures may well be merited, these closures are the minimum necessary to fulfill BLM's legal mandate to protect Monument objects.

Many of the areas below include canyon bottom plant communities, which are identified as a monument object in both Proclamation 6920 and 10286. Riparian vegetation in the Escalante canyons and Kaiparowits Plateau canyons is also specifically called out as a monument object. Furthermore, the 1996 Proclamation identifies scarce and scattered water sources in general as a monument object, as well as the upper Paria Canyon system and wildlife that concentrate around the Paria and Escalante Rivers and other riparian corridors. We have regularly, and recently, observed significant degradation of riparian canyon bottom plant communities due to livestock grazing. See Grand Canyon Trust surveys (Appendix B) and Center for Biological Diversity survey (CBD 2023). We believe that proper protection of these Monument objects requires a cessation of their degradation by livestock grazing by making these areas unavailable for grazing. We refer back to these Monument objects when discussing many of the areas below.

Areas in Alternatives A & B

The majority of areas in Alternatives A and B have been unavailable for livestock grazing for some time, which has allowed these areas to recover ecologically. These areas exhibit some of the best land conditions on the Monument, and thus are some of the best representatives of the native landscape-level functioning ecosystems for which the Monument was established. Furthermore, Monument objects explicitly called out in the proclamations are located amongst these areas, including the following: canyon bottom plant communities, riparian vegetation and riparian corridor wildlife, seeps and springs, biological soil crusts, Death Hollow, Sand Creek, Calf Creek, and Bull Valley Gorge. Allowing grazing in these areas would entail degradation of Monument objects, many of which have recovered to a degree from previous grazing. If the BLM proposes to make any of these areas available for grazing, it must demonstrate how such an action is consistent with the protection of Monument objects.
In addition, many of these areas were closed to grazing two decades ago owing to voluntary agreements worked out by ranchers and conservationists in the late 1990s that led ranchers to

relinquish their grazing privileges so that BLM could more easily designate the underlying lands as unavailable for grazing. As a result of those agreements, and after a public-planning process, BLM chose over two decades ago to allocate these areas as unavailable or unallotted for grazing, finding that the Monument would benefit–with a healthier river, better wildlife habitat, recovered fisheries, and a wilder place to explore and find solitude.[12] Given the history that led to the retirement of these areas from grazing, it is our view that BLM should, as an equitable matter in light of past agreements and resources expended, treat these relinquishments in a manner equivalent to lands retired from grazing via voluntary relinquishments made under Proclamation 10286.

Deer Creek allotment, Wolverine Bench pasture; Little Bowns Bench; and Phipps allotment, Phipps pasture have been used as forage reserves with little to no grazing. Consequently, they exhibit some of the best land conditions on the Monument, and thus are some of the best representatives of the native landscape-level functioning ecosystems for which the Monument was established. Furthermore, Monument objects are present in these areas, such as biological soil crusts, some of which are in very good condition. Allowing grazing in these areas would entail degradation of Monument objects, many of which have recovered to a degree from previous grazing. If the BLM proposes to make any of these areas available for grazing, it must demonstrate how such an action is consistent with the protection of Monument objects.

Regarding Deer Creek allotment, Wolverine Bench pasture, the two upland rangeland health assessment sites in this pasture both met Standards for Rangeland Health. Chinle slopes below Wingate Sandstone cliffs along the eastern boundary of the Wolverine Pasture of this allotment could support populations of Jones' cycladenia (*Cycladenia humilis var. jonesii*), but this area has not been surveyed and the most likely areas may actually be in the adjacent Death Hollow allotment. None of the Wolverine Bench Pasture of the Deer Creek allotment has been comprehensively surveyed for cultural resources, and no sites have been recorded. Considering adjacent allotments and landforms, there are very likely sites within this allotment that have yet to be documented (GSENM 2008). The Wolverine Bench pasture is also valuable for recreation. It includes the top of Wolverine Bench and the scenic narrows of Wolverine Creek.

Some of the land health assessment sites on Little Bowns Bench have not been grazed for decades and, as a consequence, are in near relict condition (GSENM 2002, EO214). They have high values for intact native vegetation as well as biocrusts.

[12] BLM, Utah State Office, Escalante Management Framework Plan Approved Amendment and Decision Record, 2 (Mar. 15, 1999); BLM, Grand Staircase-Escalante National Monument, Environmental Assessment: Proposed Plan Amendment – Grazing, 16–19 (Dec. 7, 1998).

Areas in Alternative C

Lake allotment, Navajo Point pasture

The Lake allotment on the Kaiparowits Plateau is an area of particularly high archaeological site density with "complex, locally unique sites." Zweifel notes 4% of sites showing grazing-related adverse impacts. Also, the Lake allotment is difficult to access for both permittees and BLM staff. This has resulted in trespass and chronically low poor rangeland health scores for springs and riparian areas. Nineteen riparian sites were assessed in 2002. One was nonfunctioning, and the rest were functioning at risk, and have concerns about increased headcutting, incision, or bank trampling (often from hoof action) and reduction of the riparian area. In most of the wet meadow communities exotic grasses such as Kentucky bluegrass, Redtop, Timothy, and Rabbitsfoot grass have become established and are often dominant. Some of these areas were re-assessed in 2007 and showed improvement, but since then cattle are again grazing on the Lake allotment. A 2015 biocrust study by the Grand Canyon Trust showed recent cattle impacts, and we are concerned that livestock are again impacting some of these riparian areas. The Bowker model predicted 40% biocrust ground cover, but actual biocrust percentages in the uplands were 0% (Grand Canyon Trust 2015). There is also potential for conflicts between recreational users and cattle around springs and other water sources (GSENM 2008).

Regarding Navajo Point pasture in particular, three of the four upland land health assessment sites were functioning at risk, including the only grassland and meadow site on the pasture. The National Park Service, Glen Canyon NRA, has significant concerns with resource conditions on Navajo Point, particularly riparian conditions and protecting cultural resources.

Soda allotment

The Soda allotment includes part of Fiftymile Bench. The sagebrush steppe ecosystem here is explicitly called out as a monument object in Proclamation 10286. A land health assessment of a sagebrush grassland site (E1550) was rated functioning at risk due to increased water flow and wind erosion, reduced soil surface stability, decreased cover of cool season perennial grasses and biological soil crust, and increased cover and litter from cheatgrass, which was 30% cover (GSENM 2008; GSENM 2002 E1550). In addition, Pole Well Spring was rated Functioning at Risk in 2002 and 2007, and the other springs on this allotment rated poorly. Two were rated non-functioning due to reductions in the extent of riparian vegetation from de-watering or trampling, reduced vigor and poor age and size class distribution of riparian plant species, and invasion by exotics. Seven springs were rated functioning at risk due to reduced wetland area and vegetation cover, poor size and age class distribution and vigor of wetland plants, eroding banks, and increased cover of exotic species (GSENM 2008 page 741). The BLM determined that grazing management practices or levels of grazing use were a significant factor in not meeting the Rangeland Health Standard for upland soils and riparian and wetland areas. Existing grazing management needs to be changed. (GSENM 2008 page 742). Parts of the Bench pasture have

high potential for late-successional soil crust (>25% cover) (Draft RMP and EIS Vol. 2 p. 3-7), which is an object requiring protection in the Proclamation.

Rock Creek-Mudholes allotment, Grand Bench pasture

On the allotment overall, four lentic sites were rated Non-Functioning and seven were Functioning-at-Risk. Several lotic reaches were rated Non-Functioning due to heavy grazing and removal of vegetation, trampling, exotic invasion, discontinuous graminoid cover, headcuts, compaction, erosion, incised banks, dewatering and/or excavation. Unrestricted year-round use by feral cattle in the past has had a major influence on riparian health (GSENM 2008 pp. 668-669). Some of these springs were reassessed in 2007 but all were still Functioning-at-Risk. Also, note that these assessments were conducted prior to resumption of livestock grazing. Rock Creeks-Mudholes is difficult to access for both permittees and BLM staff. This results in trespass and chronically poor rangeland health scores for springs and riparian areas. The only aspen groves on GSENM, which are specifically called out as a monument object in Proclamation , are also in poor condition due to cattle grazing.

Regarding the Grand Bench pasture of the Rock Creek-Mudholes allotment, Zweifel noted livestock presence at almost every site, with adverse grazing impacts noted at 61% of sites. It was also noted that those sites not suffering direct grazing-related impacts were generally suffering from advanced erosion due to a lack of ground vegetation, a secondary impact resulting from grazing. The 1961 University of Utah survey of the Kaiparowits seems to have been largely if not entirely within this allotment. It records at least eleven sites, many with multiple structures. It refers to sites having “melted” down, but there were, as of 1961, still quite a number of sites with walls three to five courses (layers of architectural stones) high.

Fortymile Ridge allotment

Four of ten riparian assessments in this allotment were rated functioning at risk or non-functioning. The rest were PFC (GSENM 2008 page 337-338). It was determined that livestock were a factor in not meeting rangeland health standards for riparian and wetland areas.

This allotment also includes part of Fiftymile Bench, within the West pasture. The sagebrush steppe ecosystem is explicitly called out in Proclamation 10286 as a Monument object. Much of the West pasture also has high potential for late-successional soil crust (>25% cover) (Draft RMP and EIS Vol. 2 p. 3-7), which is an object requiring protection in the Proclamation.

Areas in Alternative D

Boulder Creek allotment

The Boulder Creek allotment includes canyon bottom plant communities, riparian vegetation in the Escalante canyons, riparian corridor wildlife, dunal pocket plant communities and well-developed biological soil crusts, all of which are Monument objects. In the riparian corridor,

willow species have been heavily browsed which has stunted their growth. Heavily browsed riparian vegetation not only has an impact on the plant community, but on riparian corridor wildlife, including beaver and birds. The presence of cattle in riparian adjacent uplands has diminished well-developed biological soil crust communities, and left large swaths of bare ground in their place, affecting habitat for canyon bottom plant communities and dependent wildlife. Native bunch grasses nestled into cattle-accessible dunal pocket communities have been grazed and left with few seedheads, further degrading the ecological integrity of Boulder Creek's uplands. For more detailed information on cattle impacts to Monument objects in Boulder Creek, see the 2023 "Boulder Creek Condition Assessment" in Appendix B. Due to the degradation of the aforementioned Monument objects by permitted grazing, this allotment should be made unavailable for grazing.

Circle Cliffs allotment, Gulch and Lampstand pastures

Circle Cliffs allotment is part of the Circle Cliffs landscape described in both Proclamations 6920 and 10286. The Gulch pasture includes canyon bottom plant communities, riparian vegetation in the Escalante canyons, riparian corridor wildlife, and biological soil crusts, all of which are Monument objects. The riparian area in the upper Gulch is degraded from permitted grazing. Non-native species including cheatgrass, Russian thistle, purple mustard, alfalfa, and smooth brome dominate a significant portion of the riparian-adjacent or upland terraces. These terraces also include extensive areas of bare ground. Stretches of the banks of the Gulch are dominated by rabbitbrush, an unpalatable disturbance-induced species, rather than woody riparian species such as cottonwood and willow that one would expect in a healthy riparian area. In addition, this portion of the Gulch is severely incised with relict cottonwoods stranded multiple terraces up and far away from the stream.

The Lampstand pasture failed all of the Standards for Rangeland Health in 2002 due to compacted bare ground, loss of native vegetation, prevalence of non-native plants, and complete loss of biocrust. It has been mechanically treated multiple times, including once in 2007, but vegetation projects (and all others on the Circle Cliffs allotment) routinely fail. Livestock trespass is common. According to a 2008 allotment summary, migratory birds are a concern in the pinyon-juniper and sagebrush/grassland habitat types in this pasture. BLM says that future management of the existing seedings will have an influence on some of these migratory birds and should be taken into account when planning treatments. Also, use by elk and deer occurs on this allotment during the fall/winter and early spring months. This pasture has reached an ecological tipping point and may not recover at all, and is much less likely to recover without cessation of grazing. Due to the degradation of the aforementioned Monument objects by permitted grazing, these pastures should be made unavailable for grazing.

Cottonwood allotment, Paria River, Paria Box, and Gravelly Hills pastures

These pastures of the Cottonwood allotment include canyon bottom plant communities, riparian vegetation in the Paria River, riparian corridor wildlife, the Cottonwood Canyon riparian area that provides habitat for the endangered southwestern willow flycatcher, biological soil crusts, and numerous rare plants, including the globally imperiled endemic plant Tropic goldeneye and rare Atwood's pretty phacelia, all of which are Monument objects. Additional rare plants not mentioned in the proclamations but documented in the Gravelly Hills Pasture include: currantleaf globemallow (*Sphaerlacea moorei*), Stood's phacelia or beautiful scorpionweed (*Phacelia pulchella* var*. sabulonum*), Kaiparowits milkvetch (*Astragalus malacoides*) and Paria spurge (*Euphorbia nephradenia*). In addition, Hogeye Creek and Snake Creek, which are in this area, each include a Mexican spotted owl Protected Activity Center. Cattle pressures on riparian vegetation have left populations of willow, cottonwood, and graminoids stunted and struggling for survival, undermining the endangered southwestern willow flycatcher's habitat. Cattle trampling has decimated biological soil crusts and canyon bottom plant communities with large swaths of bare ground in their wake. A recent survey of this allotment conducted by the Center for Biological Diversity (Appendix C) demonstrates the significant pressures cattle are continuing to have on these Monument objects, well past the cattle's scheduled exit dates. This trampling and overuse by cattle has the potential to impact the globally imperiled endemic plant Tropic goldeneye, Atwood's pretty phacelia, as well as other rare plants, all of which are Monument objects. For more information, read the "Cottonwood Condition Assessment" in Appendix B, and the "Cattle Impact Surveys in Grand Staircase Escalante National Monument" in Appendix C, both based on 2023 field surveys.

Additional information regarding the conditions of riparian vegetation in the Paria River are available through the BLM's Assessment, Inventory, and Monitoring (AIM) Data Viewer.[13] The table below includes AIM Lotic Indicators data collected in 2015 along the Paria River for two sites in the Paria River pasture, one site in the Gravelly Hills pasture, and a site in the Paria Canyon-Vermilion Cliffs Wilderness. The site in the Paria Canyon-Vermilion Cliffs Wilderness does not have any permitted grazing use. Thus it provides a reference for potential conditions when the impacts of grazing are removed. This is the only such site in the Paria River drainage to use for comparison to grazed sites. The table below shows appreciable differences between the grazed and ungrazed sites:

Attribute Label	**Range**	**Paria Wilderness**	**Paria - Gravelly Hills Pasture**	**Paria - Paria River Pasture N**
PointID		CO-RO-9411	GS-RO-9013	GS-RO-9001

[13] https://blm-egis.maps.arcgis.com/apps/webappviewer/index.html?id=d96ef73e800749ba8e25443661ecc55c

StreamName		Paria River	Paria River	Paria River
FieldEvalDate		6/20/2015	7/1/2015	6/21/2015
PctOverheadCover	0-100%	36.6	1.9	6.7
PctBankOverheadCover	0-100%	67.1	17.4	32.1
VegComplexity	0-2.6	0.4	0.38	0.36
VegComplexityWoody	0-2.6	0.38	0.37	0.25
VegComplexityUnderstoryGround	0-2.6	0.35	0.37	0.21

Percent overhead cover, which is measured mid-channel, in the Gravelly Hills pasture is 5% and in the Paria River pasture is 18% of that at the Paria Wilderness site. Percent bank overhead cover, measured at the scour line on both sides of the creek, in the Gravelly Hills pasture is 26% and in the Paria River pasture is 48% of that at the Paria Wilderness site. Vegetation complexity, which averages the vegetative cover of the canopy (>5m), understory (0.5-5m), and ground layers (<0.5m) on both sides of the creek, in the Gravelly Hills pasture is 95% and in the Paria River pasture is 90% of that at the Paria Wilderness site. Woody vegetation complexity, which averages the woody vegetative cover of the canopy, understory, and ground layers on both sides of the creek, in the Gravelly Hills pasture is 97% and in the Paria River pasture is 66% of that at the Paria Wilderness site. Understory and ground layers vegetation complexity, which averages the vegetative cover of the understory and ground layers on both sides of the creek, in the Gravelly Hills pasture is 106% and in the Paria River pasture is 60% of that at the Paria Wilderness site.

These data show significant degradation of riparian vegetation, in particular overhead cover, in the Gravelly Hills and Paria River pastures not even from reference conditions, but from potential recovery. Permitted grazing is a primary difference between these two sites and the Paria Wilderness site, and thus a primary driver of the differences in conditions. This is confirmed by our on-the-ground observations summarized above and presented in the "Cottonwood Condition Assessment" in Appendix B.

Previous monument archaeologist Matt Zweifel conducted an analysis from 2011-2016 in which he monitored cultural resource site condition and trends, focusing on adverse impacts from livestock grazing. While we do not have specific pasture information, he recorded adverse impacts from livestock at 32% of the monitored sites within the Cottonwood allotment. Grazing impacts had previously been noted at 75% of the sites and we believe his analysis to be conservative, thus the downward trend. He recommended additional mitigation measures, but as the DEIS notes, "Although adverse effects would be minimized with the reduction of livestock, as long as some livestock remain, there is potential for adverse effects." (p. D-14).

Due to the degradation of the aforementioned Monument objects by permitted grazing, these pastures should be made unavailable for grazing.

Headwaters allotment, Fourmile Canyon and Halfmile Canyon
Fourmile and Halfmile Canyons include canyon bottom plant communities and riparian corridor wildlife, which are Monument objects. In addition, Fourmile Canyon includes a Mexican spotted owl Protected Activity Center.

Riparian vegetation in both canyons is in better condition than in many other areas on the Monument, but there are grazing management issues impacting these areas. There is evidence of grazing use in Halfmile Canyon, and in places the understory of the riparian area is dominated by non-native species, including alfalfa, cheatgrass, and Russian thistle. Halfmile Canyon has a fence near the upper end of the canyon but not at the bottom, and the fence at the upper end appears to be non-functional. Fourmile Canyon also has evidence of a former fence near the upper end of the canyon, but it too is non-functional. In order to protect the aforementioned Monument objects, these canyons should be made unavailable for grazing, and on-the-ground infrastructure should ensure that cattle cannot enter these areas.

King Bench allotment, King Bench and Durffey Mesa pastures
King Bench Pasture of the King Bench allotment includes canyon bottom plant communities, riparian vegetation in the Escalante canyons, and riparian corridor wildlife, all of which are Monument objects. In addition, Ute ladies'-tresses (*Spiranthes diluvialis*), a Threatened species under the Endangered Species Act, occurs along Deer Creek from the Deer Creek Campground south to the narrows of Deer Creek Canyon. The conditions within King Bench pasture of King Bench allotment do not constitute protective management of these Monument objects as Proclamation 10286 requires. Riparian plants have been severely browsed, leaving denuded streambanks and a simplified creek channel. Springs and tinajas in the uplands between Deer Creek and the Gulch have been trampled and contain an excess of feces in and along the water's edges. Biocrust have been trampled and canyon bottom upland plants have been severely utilized resulting in significant swaths of bare ground. In addition to the extensive ecological degradation in this pasture, it is subjected to regular and documented non-compliance, with cattle often remaining well past the off date. Proper protection of the Threatened Ute ladies'-tresses is an additional reason to allocate this area as unavailable for grazing. For more detailed descriptions on conditions within the King Bench pasture, see the "King Bench Condition Assessment" in Appendix B.

Additional information regarding the conditions of riparian vegetation in the King Bench pasture are available through the BLM's Assessment, Inventory, and Monitoring (AIM) Data Viewer. The table below includes AIM Lotic Indicators data collected in 2014-2015 for a site in

The Gulch within King Bench pasture and a site near the mouth of Steep Creek, which flows into The Gulch. Steep Creek, while it has been subject to trespass cattle use, has not had permitted cattle for about 20 years. Thus it provides a reference for potential conditions when the impacts of grazing are removed or significantly reduced. This is the only such site in The Gulch drainage to use for comparison to grazed sites. The table below shows appreciable differences between these two sites:

Attribute Label	Range of Values	Steep Creek	The Gulch
PointID	-	GS-SS-9024	CO-LS-9432
StreamName	-	Steep Creek	Gulch, The
FieldEvalDate	-	9/17/2014	6/25/2015
PctOverheadCover	0-100%	87.3	28.3
PctBankOverheadCover	0-100%	67.5	41.7
VegComplexity	0-2.6	1.2	0.41
VegComplexityWoody	0-2.6	1.15	0.33
VegComplexityUnderstoryGround	0-2.6	0.94	0.27

Percent overhead cover, which is measured mid-channel, in The Gulch is 32% of that in Steep Creek. Percent bank overhead cover, measured at the scour line on both sides of the creek, in The Gulch is 62% of that in Steep Creek. Vegetation complexity, which averages the vegetative cover of the canopy (>5m), understory (0.5-5m), and ground layers (<0.5m) on both sides of the creek, in The Gulch is 34% of that in Steep Creek. Woody vegetation complexity, which averages the woody vegetative cover of the canopy, understory, and ground layers on both sides of the creek, in The Gulch is 29% of that in Steep Creek. Understory and ground layers vegetation complexity, which averages the vegetative cover of the understory and ground layers on both sides of the creek, in The Gulch is 29% of that in Steep Creek.

These data show significant degradation of riparian vegetation in The Gulch not even from reference conditions, but from potential recovery. Permitted grazing is the primary difference between these two sites, and thus the primary driver of the differences in conditions. This is confirmed by our on-the-ground observations summarized above and presented in the “King Bench Condition Assessment” and the “2021 King Bench Report” in Appendix B.

Durffey Mesa pasture within the King Bench allotment includes well-developed biological soil crusts, which is a monument object. Durffey Mesa provides a stark contrast to the King Bench pasture. With no evidence of cattle visitation, this rugged and remote mesa is home to some of the Monument’s most striking communities of native species including highly developed

biological soil crusts, old-growth trees, diverse bunchgrasses, abundant forbs, a small spring, and a remote hanging garden. Considering that this pasture is not being utilized by cattle, while hosting many intact GSENM objects, this mesa should be made unavailable for grazing. In particular, Durffey Mesa's undisturbed, well-developed biocrust (characterized by dark cyanobacteria and moss or lichen) should be preserved, and trampling by cattle should be prevented. See the "Durffey Mesa Condition Assessment" in Appendix B for more details. Due to the degradation of the aforementioned Monument objects by permitted grazing, these pastures should be made unavailable for grazing.

Lower Hackberry allotment, Hackberry Canyon; Upper Hackberry allotment, Hackberry Canyon and Round Valley Draw narrows

Hackberry Canyon is specifically noted as a place of value in Proclamation 10286, and thus a monument object requiring protection. Hackberry Canyon and Round Valley Draw narrows include canyon bottom plant communities, riparian corridor wildlife, and evidence of human utilization over many generations, all of which are Monument objects. In addition, Sam Pollock Canyon, which is in this area, includes a Mexican spotted owl Protected Activity Center. The degraded ecological conditions outlined in the "Hackberry Canyon Condition Assessment" (Appendix B), based on an April 2023 survey, illustrate the significant damage that grazing in these allotments is inflicting upon these unique Monument objects, in violation of the Proclamation. Damages include excessive browsing of woody riparian vegetation, trampling-induced erosion, heavy grazing of canyon bottom plant communities, and decimated biological soil crusts. These conditions also have the potential to negatively impact Mexican Spotted Owl habitat. An October 2023 survey of the Lower Hackberry allotment (see CBD 2023) found damage from livestock: concentrated at the Hackberry/Cottonwood Creek confluence; upstream of the confluence concentrated in the streambed and occasionally to the banks; and on uplands upstream of the box canyon, where upland crusts are trampled and banks are compacted, trampled, and chiseled.

To continue to allow the unique values found in Hackberry Canyon and its tributaries to be degraded by cattle grazing is not consistent with the protection of Monument objects. Due to the degradation of the aforementioned Monument objects by permitted grazing, Hackberry Canyon and Round Valley Draw narrows should be made unavailable for grazing.

Upper Paria Allotment, Upper River pasture and Henrieville Creek

The Upper River pasture of the Upper Paria allotment includes canyon bottom plant communities, riparian vegetation in the Paria River, riparian corridor wildlife, and Willis Creek, all of which are Monument objects. A late spring 2023 visit to the Upper River pasture within the Upper Paria allotment found overutilization of native woody riparian species by cattle,

heavily grazed canyon bottom graminoids, extensive bare ground, and compromised water quality. The conditions in the Upper River pasture are inconsistent with the proper protection and management of Monument objects. See the "Upper Paria River Condition Assessment" in Appendix B for more information on conditions within this pasture.

Additional information regarding the conditions of riparian vegetation in the Upper River pasture are available through the BLM's Assessment, Inventory, and Monitoring (AIM) Data Viewer. The table below includes AIM Lotic Indicators data collected in 2015 along the Paria River for two sites in the Upper River pasture and a site in the Paria Canyon-Vermilion Cliffs Wilderness. The site in the Paria Canyon-Vermilion Cliffs Wilderness does not have any permitted grazing use. Thus it provides a reference for potential conditions when the impacts of grazing are removed. This is the only such site in the Paria River drainage to use for comparison to grazed sites. The table below shows appreciable differences between the grazed and ungrazed sites:

Attribute Label	Range	Paria Wilderness	Paria - Upper River Pasture S	Paria - Upper River Pasture N
PointID		CO-RO-9411	GS-RO-9017	GS-LS-9025
StreamName		Paria River	Paria River	Paria River
FieldEvalDate		6/20/2015	6/20/2015	6/14/2015
PctOverheadCover	0-100%	36.6	1.2	0
PctBankOverheadCover	0-100%	67.1	29.4	13.9
VegComplexity	0-2.6	0.4	0.52	0.26
VegComplexityWoody	0-2.6	0.38	0.39	0.08
VegComplexityUnderstoryGround	0-2.6	0.35	0.32	0.08

Percent overhead cover, which is measured mid-channel, at the Upper River pasture sites is 0% and 3% of that at the Paria Wilderness site. Percent bank overhead cover, measured at the scour line on both sides of the creek, at the Upper River pasture sites is 21% and 44% of that at the Paria Wilderness site. Vegetation complexity, which averages the vegetative cover of the canopy (>5m), understory (0.5-5m), and ground layers (<0.5m) on both sides of the creek, at the Upper River pasture sites is 65% and 130% of that at the Paria Wilderness site. Woody vegetation complexity, which averages the woody vegetative cover of the canopy, understory, and ground layers on both sides of the creek, at the Upper River pasture sites is 21% and 103% of that at the Paria Wilderness site. Understory and ground layers vegetation complexity, which averages the vegetative cover of the understory and ground layers on both sides of the creek, at the Upper River pasture sites is 23% and 91% of that at the Paria Wilderness site.

These data show significant degradation of riparian vegetation in the Upper River pasture not even from reference conditions, but from potential recovery. Permitted grazing is a primary difference between these two sites, and thus a primary driver of the differences in conditions. This is confirmed by our on-the-ground observations summarized above and presented in the "Upper Paria Condition Assessment" in Appendix B. Due to the degradation of the aforementioned Monument objects by permitted grazing, this pasture should be made unavailable for grazing.

Henrieville Creek includes canyon bottom plant communities, rare plant species, and riparian corridor wildlife, all of which are Monument objects. In addition, Ute ladies'-tresses (*Spiranthes diluvialis*), a Threatened species under the Endangered Species Act, occurs along Henrieville Creek near the confluence of Shurtz Bush Creek. Henrieville Creek is fed by a multitude of mineral-rich springs and seeps. Permitting cattle to graze along Henrieville Creek gives them easy access to these fragile ecosystems, which is in direct opposition with the stated Monument objects and the values. Cows do, in fact, utilize these spring-fed wetland terraces leaving compacted soils, feces, and trampled banks in their wake. Proper protection of the Threatened Ute ladies'-tresses is an additional reason to allocate this area as unavailable for grazing. For more on the conditions within Henrieville Creek Pasture of the Upper Paria Allotment see the "Henrieville Creek Condition Assessment" in Appendix B. Due to the degradation of the aforementioned Monument objects by permitted grazing, the Upper River pasture and Henrieville Creek should be made unavailable for grazing.

Allowing grazing in the above areas would entail continued degradation of Monument objects, as we have demonstrated in currently occurring. If the BLM proposes to make any of these areas available for grazing, it must take a hard look at the associated environmental effects and demonstrate how such an action is consistent with the protection of Monument objects.

Finally, we have suggested additional language for this row to ensure that Monument objects will be protected while the management direction is being implemented. Changes necessary to protect Monument objects until grazing closures are completed should be implemented. Limiting utilization to 30% is a management-relevant criteria that could be implemented relatively easily and that we believe is necessary to protect Monument objects, but may not be sufficient. In other words, BLM should at least adopt a 30% utilization limit in these situations, but may need to implement additional measures to ensure the protection of Monument objects until grazing closures are completed.

Rows 173 & 175

Allocate acres available and AUMs for livestock commensurate with the areas allocated as available for grazing taking into account unavailable areas adopted in the final plan from Row 172. Do not adopt the following language from Alternative A: "When active AUMs reach 95 percent of permitted AUMs, reevaluate whether the maximum permitted AUMs may be increased. Increasing permitted AUMs would require a plan amendment and associated NEPA analysis."

Rows 173 & 175 Rationale

BLM's assertion that each and every alternative would protect Monument objects, despite the significant differences in the acreage available for livestock grazing and the number of animal unit months allocated – that is the extent and intensity of grazing – is based on a flawed assumption that rangeland health standards can act as a proxy for protection of Monument objects. "BLM will manage livestock grazing to meet the Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah (BLM 1997) in a manner that is consistent with the protection of GSENM objects" (Draft RMP & EIS Vol. 1, p. 2-15). The DEIS quantifies the differences among the alternatives in tables 3-85 and 2-1.

Table 3-85. Livestock Grazing Availability and AUM Allocations by Alternative

Livestock Grazing	Alternative A	Alternative B	Alternative C	Alternative D
Acres available for livestock grazing	2,116,200	2,037,700	1,927,300	1,150,000
Acres unavailable for livestock grazing	125,800	,204,300	314,700	1,092,000
AUMs allocated for livestock grazing	107,995	105,034	95,406	45,248

Source: BLM GIS 2022

Table 2-1. Quantifiable Summary of the Alternatives Re source, Resource

Livestock Grazing (acres)	**Alternative A**	**Alternative B**	**Alt. C**	**Alt D**
Available for livestock grazing	2,116,200	2,037,300	1,927,000	1,150,000
Unavailable for livestock grazing	125,800	204,700	315,000	1,092,000
Total	**2,242,000**	**2,242,000**	**2,242,000**	**2,242,000**

The DEIS seems to assert that Alternative B will protect Monument objects just as well as Alternative D, even though Alternative B includes more than double the number of AUMs and acres open for grazing. The DEIS lacks any analysis to support this assertion. This unsupported conclusion is not the "hard look" NEPA requires. Without further analysis, the Agency should

allocate acres available and AUMs for grazing commensurate with the areas allocated as available for grazing taking into account unavailable areas adopted in the final plan from Row 172.

With respect to the language from Alternative A regarding the possibility of increasing the maximum number of permitted AUMs, the BLM should not be seeking to increase a discretionary use with the potential to adversely impact Monument objects. Furthermore, as the language indicates, this Plan is not the appropriate place for analysis of this issue.

Row 174

Leave the language from Alternative A out of the final plan.

Row 174 Rationale

The unallotted areas of Antone Flat, Upper Paria-South pasture, and Varney Griffin allotment have been unallotted for livestock grazing for some time, which has allowed these areas to recover ecologically. These areas exhibit some of the best land conditions on the Monument, and thus are some of the best representatives of the native landscape-level functioning ecosystems for which the Monument was established. Furthermore, Monument objects explicitly called out in the proclamations are located amongst these areas, including the following: canyon bottom plant communities, riparian vegetation and riparian corridor wildlife, seeps and springs, biological soil crusts, Death Hollow, and Bull Valley Gorge. Allowing grazing in these areas would entail degradation of Monument objects, many of which have recovered to a degree from previous grazing. If the BLM proposes to make any of these areas available for grazing, it must demonstrate how such an action is consistent with the protection of Monument objects.

Row 176

Adopt the language from Alternatives B/C in the final plan, with the following modifications:

1. Add the following language: "Renewals for any permits covering an area found to be failing land health standards with livestock grazing as either a partial or sole causal factor will be analyzed in an environmental assessment of environmental impact statement."
2. Modify the language in the final paragraph as follows: "If a land health determination indicates that grazing use is not consistent with the provisions of 43 CFR 4180 *or the protection and restoration of GSENM objects*, decrease permitted use in accordance with 43 CFR 4110.3-2 and make changes to grazing practices to support the achievement of the BLM Utah Rangeland Health Standards and ensure consistency with the protection and restoration of GSENM objects." (modification in italics).
3. Add the following language: "In areas where land health assessments, causal factor determinations (if needed) and grazing permit renewals are not completed within the

specified time frames, utilization will be limited to 30% to ensure protection of GSENM objects until such assessments, determinations, and renewals are completed."

4. Add the following language: "No grazing permits will be renewed more than once under the FLPMA 402(c)(2) rider."

Row 176 Rationale

The following provide a rationale corresponding to the same number directly above:

1. The plan should clarify what is meant by "full processing" of grazing permit renewals. This includes under what circumstances a permit renewal will go through a full NEPA analysis in the form of an environmental assessment or environmental impact statement and under what circumstances a permit will be categorically excluded. We propose that, at a minimum, any permits covering an area found to be failing land health standards with livestock grazing as either a partial or sole causal factor be analyzed in an environmental assessment or an environmental impact statement. Failure to meet land health standards with a discretionary use as a causal factor in a national monument is a significant concern, and calls for the kind of in-depth analysis and public process that the NEPA process affords.
2. Grazing must be consistent with the protection and restoration of GSENM objects (as is stated in the current language). Thus, land health determinations should examine consistency not only with 43 CFR 4180, but also with the protection and restoration of GSENM objects. Our proposed modification makes this explicit.
3. The Agency is proposing to require land health assessments for these allotments because they are within departed watersheds. Since these areas are already degraded, changes necessary to protect Monument objects until the stated assessments, determinations, and renewals are completed should be implemented. Limiting utilization to 30% is a management-relevant criteria that could be implemented relatively easily and that we believe is necessary to protect Monument objects, but may not be sufficient. In other words, BLM should at least adopt a 30% utilization limit in these situations, but may need to implement additional measures to ensure the protection of Monument objects until the assessments, determinations, and renewals are completed.
4. Currently, all allotments on GSENM have been renewed with the same terms and conditions without preparation of an environmental assessment or environmental impact statement at least once, even in allotments that are failing rangeland health standards. Permit renewals utilizing a full NEPA analysis provide for land health assessments and public participation. These are important components of rangeland management that are not achieved by relying on the Amended Section 402(c)(2) of the Federal Land Policy and Management Act under which permits are automatically renewed with the same terms and conditions without any additional environmental analysis.

Row 179

Adopt the language from Alternatives B/C/D in the final plan.

Row 179 Rationale

We appreciate the BLM's thoughtful approach to the implementation of grazing permit relinquishments in Alternatives B/C/D. We support the adoption of the language in Alternatives B/C/D compared to Alternative A for two reasons. First, Alternatives B/C/D provide additional flexibility to permittees by providing a second option in the case of common allotments, where a specific geographic area could be closed as a result of the relinquishment of AUMs. Second, Alternatives B/C/D include the direction that increasing active AUMs on remaining permits or leases to replace the retired AUMs would not be allowed. We believe this should be included as a matter of transparency and equity. If this were to be allowed, it would undermine the motivation for voluntary relinquishments in common allotments, making any such relinquishments extremely unlikely. We believe that this is opposed to the spirit of the voluntary relinquishment language in Proclamation 10286.

Row 180

Adopt the language from Alternatives B/C/D in the final plan, with the following modification:

- Modify the language in the first bullet as follows: "Adjusting livestock distribution, season of use, grazing duration, *stocking rate (AUMs)* and recovery periods." (modification in italics)

Row 180 Rationale

Alternative A fails to ensure consistency with the protection and restoration of GSENM objects as the language from Alternatives B/C/D does. The prioritization of adaptively managing season of use, duration, and distribution of grazing over changes to stocking rate is likely to be less protective of Monument objects. In addition, the actions listed to improve land health in Alternative A have the potential to negatively impact Monument objects. Including the management direction in Alternative A without an analysis of the consistency with the protection and restoration of GSENM objects would conflict with NLCS guidance. Grazing should only be allowed in a manner and to the extent consistent with protection, care and management of Monument objects. The BLM has failed to demonstrate that Alternative A meets this obligation.

Regarding the proposed inclusion of "stocking rate (AUMs)" in the language from Alternatives B/C/D, this should be explicitly included as an adaptive management option to provide additional flexibility, and because it may be necessary to ensure consistency with the protection and restoration of GSENM objects. Appendix D of the DEIS acknowledges, based on the research of its own archaeologist (Zweifel 2016), that adverse impacts to cultural resources

from livestock grazing are proportional to the number of livestock, and that "adverse effects would be minimized with the reduction of livestock." Appendix D goes on to note that "as long as some livestock remain, there is potential for adverse effects."

Row 181

Adopt the language from Alternatives C/D in the final plan, with the following modification:

- Modify the language in the second clause as follows: "Sheep and goats could be used, as appropriate, for vegetation management or scientific research purposes, if effective physical separation between domestic sheep/goats and wild sheep is maintained. *Any use of sheep or goats for vegetation management or scientific research purposes must be consistent with the protection and restoration of GSENM objects*." (modification in italics)

Row 181 Rationale

The final plan language should make explicit that consistency with the protection and restoration of GSENM objects is required in this context.

Row 184

Adopt the language from Alternatives B/C/D in the final plan, and add the following additional detail:

"Implement drought modifications as follows using the U.S. Drought Monitor categories D0-D4:

- *Extreme (D3) and Exceptional Drought (D4)*
    - If an allotment has been mapped as D3 or D4 for one month prior to the beginning of the grazing season, livestock will not enter the allotment.
    - Livestock on an allotment will exit if the allotment is mapped as D3 or D4 for two successive weeks.
    - If drought intensity decreases for two successive weeks to D2, criteria for D2 will be applied.
- *Severe Drought (D2)*
    - If an allotment has been mapped as D2 for at least one month prior to the beginning of the grazing season, the overall time period of authorized grazing will be reduced by 50%, accompanied by a corresponding reduction in AUMs.
    - If the drought intensity in an allotment increases from D0 or D1 to D2 for at least one month during the grazing season, the remaining period of use will be reduced by 50%, accompanied by a corresponding reduction in AUMs.
    - Livestock on an allotment will exit if the allotment is mapped as D3 or D4 for two successive weeks during the grazing season.
- *Abnormally Dry (D0) and Moderate Drought (D1)*

- During D0 and D1, requests for non-use or reduced use due to drought shall be approved. Where non-use due to drought has been approved, applications from others to utilize the forage shall be denied."

Row 184 Rationale

We appreciate that the current language in Alternatives B/C/D explicitly includes the use of the U.S. Drought Monitor. Drought management should include specific, defined decision thresholds prescribing management actions, and we have thus included a proposal for doing so above. We request that this additional detail be included in the final plan.

Row 186

Adopt the language from Alternatives C/D in the final plan.

Row 186 Rationale

A current (within the last 10 years) land health assessment should be a requirement for modification of existing structural range improvements. Without such an assessment, the BLM cannot justify that the modification would support the achievement of Rangeland Health Standards with current land health assessment data.

Row 187

Adopt the language from Alternative D in the final plan, with the following modification:

- Modify the language in the first paragraph as follows: "Allow new structural range improvements on allotments *if both the structural range improvement and the construction* are consistent with the protection of GSENM objects…" (modification in italics).

Row 187 Rationale

It is important for the Plan to explicitly state that both the construction and the improvement itself must be consistent with the protection of Monument objects. This language is included in Alternative B, but Alternative D only mentions the construction of the improvement. We believe this is an oversight, which is why we propose its addition to Alternative D. In addition, enhancement of the protection and restoration of GSENM objects (in Alternative D) is superior to consistency with the protection and restoration of GSENM objects (Alternative C). If Monument objects such as soils, vegetation, or hydrological function are not at potential, simply maintaining them and avoiding further degradation to accommodate a discretionary use is not consistent with proper management of objects listed in the Proclamation. In these cases, "enhancement " or restoration to potential condition is appropriate. Considering this, the goal of "enhancement" from Alternative D should be included in the final plan.

Row 188

Leave the language from Alternative A out of the final plan.

Row 188 Rationale

This management direction to "restore" seedings using a mix of native and nonnative species has the potential to degrade Monument objects. The BLM would need to demonstrate that such an action is consistent with the protection and proper management of the host of Monument objects identified in Proclamations 6920 and 10286 in order to adopt such management direction. We do not believe that there is a sound justification for this potential action. Thus the language from Alternative A should be left out of the final plan.

Row 189

Adopt the language from Alternatives B/C/D in the final plan.

Row 189 Rationale

Nonstructural range improvements with a primary purpose of increasing forage for livestock should not be undertaken in GSENM. Livestock grazing is a discretionary use that may continue where consistent with the care and management of Monument objects, but forage for livestock should not be maximized at the expense of Monument objects or of general ecological function, which is intertwined with Monument objects.

Add New Row 1

Within 3 years of the signing of the ROD, remove from the Monument all estray cattle as defined under Utah state law as of the date the ROD is signed, not including unweaned cows running with their branded mother.

Within 1 year of discovering or receiving notice from any person that suspected estray cattle as defined under Utah state law may be present in the Monument, determine in writing whether the cattle in question are estrays under Utah state law.

Remove all estray cattle from the Monument within 2 years after making a written determination that the cattle are estrays under Utah state law.

New Row 1 Rationale

As the BLM knows, feral cattle in the Escalante River and its side canyons have been impacting the river corridor and side canyons for many years. These animals are damaging a host of Monument objects, including canyon bottom plant communities, Escalante Canyons seeps, springs, and riparian vegetation and wildlife habitat, and pollinators. The Plan should include language describing the damage that feral cattle have been causing to Monument objects, the

future threat they pose to monument objects if they are allowed to populate the Monument, and BLM's authority to remove them.

Add New Row 2

Establish closures of certain areas to serve as a scientific control to consider livestock and/or OHV effects on cultural sites.

New Row 2 Rationale

This would be an important aspect when considering livestock or OHV effects, both direct (livestock or OHVs on the sites) and indirect (such as erosion exacerbated by livestock or OHV use), as compared to other adverse effects. Restrictions for scientific purposes should be planned to take full advantage of the research potential. Areas with a variety of site types should be considered, but the restricted and open portions of the research areas should be as similar as possible in the geographic and cultural landscapes. This allows the researcher to make a parallel comparison (see Draft RMP and EIS Volume 2, p. D-13).

Add New Row 3

If a watering source or corral is found within an area of high archaeological site density, the infrastructure will be removed.

New Row 3 Rationale

We thank the BLM for providing the rationale for this management direction in Appendix D: "Removing the reason for livestock congregation would have a positive effect on any site in the vicinity" (Draft RMP and EIS Volume 2, p. D-13). Range infrastructure "tends to focus livestock use into certain areas, concentrating the related adverse effects. When cultural resource sites are found in the vicinity of these improvements, the adverse impacts on these sites can rise significantly…

Livestock congregation at a watering source not only intensifies livestock use of the source area itself but also increases livestock use of the surrounding area. Data from Glen Canyon National Recreation Area indicate that cattle tend to stay within a 2-mile radius of their water source (U.S. Department of the Interior, National Park Service 1999:22), meaning that livestock would affect sites within that 2-mile radius to a greater degree than outside that area" (p. D-13).

Recreation

Protects Monument Objects:

- Management prescriptions for group sizes and camping are protective of Monument objects under Alternative C.

Needs work:

- We agree with the BLM that "large numbers of visitors can both degrade the visitor experience and impede protection of GSENM objects, including ecologically sensitive areas." DEIS, ES-3. Without designation of recreation management areas, BLM may be unable to address the special needs of heavily used recreational areas that require more intensive management or extra recreation investment. However, while mentioned in the Monument Proclamation, recreation is not a Monument object. Recreation is a discretionary use, permissible only to the extent compatible with the care and protection of Monument objects and values.
- Recreation can best be managed to protect and care for Monument objects through adoption of a management area/ zones approach overlaid with designation of recreation management areas as outlined in Alternative C. However, even under Alternative C, we are concerned about some of the management prescriptions for the proposed Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs). All the alternatives, including Alternative C, and Appendix E, inappropriately prioritize the enhancement of recreation to the potential detriment of Monument objects and values**.** Recreation management areas cannot be used as a mechanism to support activities and infrastructure that would otherwise not be appropriate in a national monument designated to protect and enhance other objects and values, and this should be clearly articulated in all final management directions for any designated recreation management areas, and more broadly in the resource management plan goals and objectives.

Areas where Monument objects are not protected:

- There are management prescriptions in Appendix E that inappropriately seek to enhance recreation rather than manage it to protect Monument objects and values.
- Overall, BLM must be cautious throughout its DEIS and forthcoming plan not to prioritize recreation uses over protection of identified Monument objects.

Alternatives Comparison

Row 193

BLM should not adopt the common goal in Alternatives B/C/D.

Row 193 Rationale

While the Proclamation recognizes the importance of recreation, it is not a purpose for which the Monument was designated. While the BLM must manage for recreation, this should be done only in the context of the protection of Monument objects and values. Having support of the travel and tourism sector as a stated goal is inappropriate, and this was not included in either the 2020 or the 2000 GSENM management plans.

Row 194

BLM should adopt the proposed objective for Alternatives B/C/D but only with the following modifications.

First, modify the objective to state the following, "Manage recreation management to prevent conflicts with Monument resources in accordance with prescriptions in Appendix E, which shall be subject to review every three years to ensure that they are adequately protecting Monument objects and resources."

Second, modify Appendix E as described below, including adding a provision that clearly states that protection of Monument objects and values shall be the primary management focus in specially designated areas, and recreation related activities shall be allowed only the extent they are compatible with care and management of Monument objects.

Row 194 Rationale

The Agency seems to be approaching management prescriptions without appropriate acknowledgement that recreation management prescriptions for recreation areas within a national monument should be designed to protect Monument objects. The proposed management prescriptions for Alternative B include "consider motorized, mechanized, and nonmotorized/nonmechanized route designations." This direction seems to prioritize specially designated areas for additional route designations. Similarly, for Alternative C, the prescriptions include "consider the designation of OHV routes that would be in addition to the 2000 GSENM TMP for public use, as modified by this planning process, if the additional routes would increase public safety and/or enhance protection of GSENM objects." In contrast, the 2000 GSENM management plan prescriptions for specially designated areas provide for the development of mechanized trails where appropriate but did not make allowances to increase motorized recreation. The Agency should not consider SRMAs and ERMAs as a mechanism for increasing *motorized or mechanized travel*, and it should not have any prescriptions encouraging consideration of additional routes in specially designated areas. Routes can potentially harm Monument objects, and the BLM should not develop more simply to facilitate increased recreation.

As with motorized travel, special recreation areas should not allow new airstrips. The proposed special area management prescriptions for both Alternatives B and C direct the BLM to consider appropriate landing areas and landing strips for aircraft. Allowing additional airstrips in SRMAs will likely increase backcountry flying in these areas. Like motorized routes, new airstrips have the potential to harm Monument objects (including soils, vegetation, wildlife and wildlife

habitat), and the BLM should not allow them simply to facilitate recreation. This was not the management direction in either of the previous management plans for the Monument.

In addition to clearly articulating that the priority in the recreation management areas will be protection of Monument objects and values and not recreation, the Agency should adopt the following management prescriptions for all specially designated areas. These requirements will help protect Monument objects and will manage recreation without enhancing it.

- Require use of personal waste systems throughout all special designation areas unless facilities are provided
- Prohibit new fixed anchors
- Manage the number of SRP's to ensure that an undeveloped primitive and self-directed visitor experience is achieved
- Prohibit commercial vending within the Monument
- Prohibit competitive events
- Prohibit SRPs that provide for intentional visitation to known cultural sites
- Limit the number of SRP's
- Continue monitoring recreation use and Monument object conditions. Take appropriate action depending on monitoring results.
- Close and rehabilitate specially designated areas where Monument objects are seriously threatened.

Row 195

BLM should adopt the goal from the 2000 management plan.

Row 195 Rationale

The 2000 GSENM Objectives directed the BLM to use inventories, surveys, and studies to establish baseline data for Monument resources and use this to set up an ongoing monitoring program and to prioritize areas that require more restrictive management. Enacting this objective would help ensure recreation is being managed in a way that protects Monument objects and values.

Row 200

The Agency should select Alternative C subject to our recommendations for clarification of Appendix E and subject to additional clarifications about management of ERMAs v. SRMAs as described below.

Row 200 Rationale

We endorse Alternative C primarily because it is designed to align with the zoned management approach. However, we have concerns the Agency has not adequately addressed the differences between ERMAs and SRMAs either in the general context, or in the context of specific management prescriptions. One of the key differences between the alternatives is whether an area is being designated as a SRMA or ERMA, but the Agency's reasoning for these designations and the associated impacts is lacking. While the BLM offers some reasoning for why the proposed areas should be included in a recreation management area, it does not explain how it determined an area should be a SRMA v. an ERMA. And in some scenarios, such as North Escalante Canyon, the Agency seems to be evaluating the area for both designations, without clearly explaining how management of that specific area would be different depending on its designation. The Agency's proposed SRMA/ERMA designations are made even more confusing by the fact that the proposed management direction for the recreation management areas do not seem to change significantly based on ERMA/SRMA designation. Instead, they seem to remain consistent based on alternatives, regardless of whether what is being proposed is designation of a SRMA or an ERMA. As just one example, the proposed management direction for Alternatives B and C are very similar for the Burr Trail SRMA and the Circle Cliffs ERMA.

This is an overall analytical deficiency that should be addressed in the final EIS since designation of areas as SRMA rather than ERMAs is an important differentiation factor amongst the alternatives, and at least theoretically could have significant management implications. Pursuant to BLM's guidance, within a SRMA, [Recreation and Visitor Service] management is recognized as the predominant [Land Use Plan] focus, where specific recreation opportunities and recreation setting characteristics are managed and protected."[14] In contrast, "management of ERMAs is commensurate with the management of other resources and resource uses"[15] This underlies the need for BLM to explain why it is choosing to designate areas as SRMA's rather than ERMA's, and what analytical criteria it used to make these decisions.

Finally, regardless of what designation is being applied, the Agency also needs to clearly articulate that even within SRMA's and ERMA's the primary management objective will be protection of Monument objects not enhancement of recreation, and that designation of a recreation management area does not somehow allow activities or uses that would otherwise not be compatible with protection of Monument objects.

[14] BLM H-3280-1, Planning for Recreation and Visitor Services, F(b)(1).
[15] *Id.* at F(c)(1).

Row 201

The Agency should select Alternative C subject to our recommendations for clarification of Appendix E and subject to additional clarifications about management of ERMAs vs. SRMAs.

Row 201 Rationale

See Row 200 Rationale.

Row 203

BLM should Adopt the proposed management direction in Alternative C with the modification that ash removal should be recommended when firewood is imported because this ash has the potential to harm the environment and introduce foreign material into the ecosystem.

Row 203 Rationale

Widespread prohibitions of campfires are likely to be unenforceable. Because of the demand for campfires, providing guidance and regulations for how and when campfires are allowed is more likely to protect Monument objects and values.

Row 205

BLM should adopt the proposed management direction in Alternative C.

Row 205 Rationale

The zoned approach outlined in Alternative C is the most appropriate way to provide recreational opportunities while protecting Monument objects and values. Alternative C aligns development of recreation facilities with a zoned management approach.

Row 207

BLM should adopt the proposed management direction in Alternative D.

Row 207 Rationale

The BLM should be managing recreation to protect and care for Monument objects. New climbing anchors are likely to enhance climbing activity in the Monument. Utah has a significant amount of public land where intense climbing and recreation are appropriate. However, this is

not the purpose of the Monument, and the BLM should not be actively facilitating increased recreation.

Row 208

The BLM should adopt the proposed management direction for Alt B/C/D.

Row 208 Rationale

The restrictions on these activities in sensitive areas are appropriate and could help protect Monument objects while allowing for meaningful recreational opportunities.

Row 209

The BLM should adopt the proposed management direction for Alt C.

Row 209 Rationale

The zoned approach outlined in Alternative C is the most appropriate way to provide recreational opportunities while protecting Monument objects and values. Alternative C aligns camping prescriptions with a zoned management approach.

Row 210

The BLM should adopt the proposed management direction for Alt D.

Row 210 Rationale

BLM should be managing recreation to protect and care for Monument objects. Competitive events are likely to facilitate enhanced recreation. Utah has a significant amount of public land where competitive events are appropriate. However, this is not the purpose of the Monument, and the BLM should not be actively facilitating increased recreation.

Row 211

The BLM should adopt the proposed management direction for Alt B/C/D.

Row 211 Rationale

Reviewing Multi-year SRPs is an appropriate management direction to ensure the protection of Monument objects and values.

Row 212

The BLM should adopt the proposed management direction for Alt C.

Row 212 Rationale

The zoned approach outlined in Alternative C is the most appropriate way to provide recreational opportunities while protecting Monument objects and values. Alternative C aligns SRP prescriptions with a zoned management approach.

Row 213

The BLM should adopt the proposed management direction for Alt. C but with the following modification:

"Exceptions to group size limits would be considered as part of an SRP on a case-by-case basis as approved by the BLM authorized officer, if the number of people and the activities proposed are consistent with the protection of Monument objects. Appropriate NEPA analysis will be prepared on areas where permits could be authorized."

Row 213 Rationale

The proposed language puts reasonable limits on the authorized officer's discretion which will ensure Monument objects and values are being protected and the general plan direction is being complied with. This language is similar to that which was found in GROUP-3 in the 2000 Monument Management Plan and adequately allowed exceptions where necessary while still prioritizing protection of Monument objects in accordance with the Antiquities Act.

Row 216

The BLM should adopt the proposed management direction for Alternative D. No target shooting should be allowed within the monument.

Row 216 Rationale

Target shooting is inappropriate in the appreciation of monument values and inconsistent with the purpose of this monument. Hunting by permitted hunters is allowed. As recreational demands increase, target shooting will increasingly conflict with other uses. Target shooting also poses a threat to visitors and cultural resources, some of which are Monument objects. Given the BLM's limited resources, it's unclear how it would enforce provisions allowing target shooting in some areas rather than others, and a blanket prohibition is a better management

approach. The BLM itself has previously determined that target shooting can be detrimental in the context of National Monuments.[16]Safe target shooting requires choosing the appropriate location, having the right facilities, and then managing its use, all of which is more complicated and more restricted in a National Monument.

Row 218

The BLM should adopt the proposed management direction for Alternative B/C/D with provisions to protect riparian resources.

Row 218 Rationale

SRPs should consider the impact larger groups can have on riparian areas, and the management direction should specifically require that SRPs be issued only if riparian areas will not be adversely impacted.

Travel and Transportation Management

As an initial matter, BLM's analysis of travel and transportation management in the DEIS consistently uses inappropriate and inaccurate terminology to describe what routes are available for motorized vehicular use in "OHV Limited" areas. Throughout the DEIS, BLM refers to limiting visitors to "existing and designated routes" in OHV-limited areas. *See, e.g.*, DEIS at 3-121 (discussing a decision that "would have OHV travel limited to existing and designated routes."); DEIS at 3-133; DEIS at 3-150 (Table 3-46). This terminology is incorrect, and, if carried forward into the final monument plan in its current form, would violate Executive Order 11644 and FLPMA's implementing regulations.

Public motorized use in the monument is currently authorized only on those routes that have been specifically designated for such use. *See* 2000 MMP at 46. BLM has been operating under the original Travel Plan (TMP) prepared during the first Monument management planning process that was completed in 2000. 2000 MMP at 46. The 2000 TMP limits motorized and mechanized travel to 888 miles designated routes. *See* 2000 MMP at 46 ("Any route not shown [on the transportation map] is considered *closed* upon the approval of this Plan.") (emphasis added). As part of the designation process for those routes, BLM analyzed the routes pursuant to NEPA and FLPMA's minimization regulations. *See* 2000 Proposed RMP/FEIS at 2.20. In 2020, BLM analyzed and designated as open to motorized travel two additional routes through

[16] BLM, Lower Sonoran-Sonoran Desert NM Proposed RMP/Final EIS, Appendix G - SDNM Recreational Target Shooting Analysis, G-12. (May 2012)("These findings are important because they show that very few locations on a landscape level qualify as appropriate places for recreational target shooting activity on the SDNM.").

implementation-level route evaluations and analysis during the NEPA process. As such, motorized travel is only authorized on the 888 miles designated in 2000 and the two additional routes designated in 2020.

BLM has not undertaken (or proposed to undertake in a specific timeframe) a new implementation-level planning process to designate routes beyond those currently designated. We support this position; the routes designated in the 2000 MMP should form the ceiling, not the floor, for this and any future planning process. In other words, this plan should be clear that the 888 miles (plus the additional two routes) should be the highest mileage authorized in any alternative considered in this and future planning processes. Accordingly, any additional, "existing" routes are closed to motorized use. Allowing motorized use on "existing" routes that have not been designated for such use violates Executive Order 11644 and FLPMA's implementing regulation. *See, e.g.*, 43 C.F.R. § 8342.1 (requiring BLM to designate routes as open, limited or closed and locate designated routes to minimize damage to natural and cultural resources).

Protects Monument Objects:

- Until travel management planning is completed, the route designations in the 2000 MMP will apply.
- Closing Inchworm Arch Road to motorized travel (in Alt. D).
- Closing 1,209,900 acres to OHV travel in the preferred alternative.

Needs work:

- No new routes in addition to route designations in the 2000 MMP should be considered for OHV travel during implementation-level travel planning.
- BLM should not consider new landing and takeoff areas for aircraft or open the door in later travel planning to these allowances.
- BLM should also close the "V" Road to motorized travel, as it is a documented source of illegal motorized incursions into the Escalante River corridor and the North Escalante Canyons/ The Gulch WSA where the route occurs.

Areas where Monument objects are not protected:

- As discussed above, BLM must clarify that motorized travel is only allowed on those routes specifically designated for such use. Motorized travel on "existing" routes that have not been designated for such use is not authorized, violates Executive Order 11644 and FLPMA's implementing regulations. Allowing this use also does not conform to BLM policy for monuments and other NLCS areas, which states that roads should be limited to the minimum network necessary for management. This language must be changed throughout the FEIS and approved plan to make clear that OHV travel is limited to designated routes ONLY.

- Currently, the preferred alternative (Alt. C) indicates that the 2000 MMP's route designations would remain in place only until new travel management planning is complete, and that BLM would use that forthcoming travel plan process to designate as "open" new, additional routes beyond those designated in the 2000 Plan. DEIS at 3-121 ("...management under Alternative C would require future travel management to only consider the designation of OHV routes that would be in addition to the 2000 GSENM Travel Management Plan."). This does not conform with BLM's directive to prioritize and promote protection of Monument objects and resources under either Proclamation 6920 or 10286.
- BLM should adopt the language from Alternative D, which clarifies that "future travel management would prohibit the designation of routes not included in the 2000 GSENM TMP for public use… unless they are needed for public safety" (DEIS at 3-123), with the important addition of "or for the protection of Monument objects."

Alternatives Comparison

Row 224

Adopt the management direction from Alternative D in the final plan.

Row 224 Rationale

BLM is required to prioritize the protection of objects described in the Monument proclamation. BLM recognizes in the DEIS that a sizable number of these objects can be directly impacted by the passage of vehicles and indirectly by the additional visitation (and associated activities like looting and/or vandalism of archaeological and paleontological sites) that vehicle access facilitates. The draft MMP admits that each of the alternatives "would be open to potentially impactful management" concerning OHV travel (GSENM MMP pg. 3-155). For this reason, the least impactful alternative is D, which would limit vehicle use to designated routes in the 2000 Travel Plan. BLM has already determined the 2000 Travel Plan sufficiently provided for the transportation needs of surrounding communities. Routes that BLM deliberately decided not to open for public access were considered unnecessary or inconsistent with for resource protection. These conditions have not changed and 2000 MMP should be the ceiling of route designation in GSENM moving forward. In future travel planning BLM should also consider route closures (not additions) for the many reasons stated in row 224 in Alternative D (e.g., protecting erodible soils, sensitive cultural sites, Tribal sacred sites, and protection of other Monument objects). These concerns apply across the board for all OHVs, including manned and unmanned aircraft.

This applies to recreation management areas as well, and to the extent that the BLM anticipates, or presumes, that access for recreation management areas will change, this is inappropriate and arguably unlawful. For example, on pg. E-184 the Agency states that for the

Little Desert Extensive Recreation Management Area, "the authorized access would shift to designated, open routes available to a mix of vehicle types, including mountain bikes." These types of decisions must be made in a future travel plan, and cannot be assumed in the land management plan. To the extent that the Agency assumes a change in route designations or anticipates providing enhanced mechanized or motorized access for specially designated areas, this must be corrected in the Final EIS, and the Agency must clarify that motorized and mechanized access to, and within, recreation management areas will be in keeping with the 2000 management plan.

Row 225

Adopt the management direction from Alternative D in the final plan, and also close the “V” Road to motorized travel.

Row 225 Rationale

Closing the “V” Road, also designated in the 2020 planning process, is important for protecting Monument objects in the Escalante River corridor and the North Escalante Canyons/ the Gulch ISA. The road traverses a narrow cherry-stem into the ISA and facilitates frequent illegal motorized use into the ISA outside the route corridor. BLM has previously acknowledged that travel immediately off the route also harms geologic resources such as high-density moki marble sites and native sand dune ecosystems near the route. *See* 2018 Grand Staircase-Escalante National Monument and Kanab-Escalante Planning Area Draft Resource Management Plans and Environmental Impact Statement, App. K-10.

Row 227

Adopt the management direction in Alternative C in the final plan, with modifications to include closure of any areas where LWC is managed to minimize impact.

Row 227 Rationale

With requested clarifications and modifications of LWC management (*see supra* “Lands with Wilderness Characteristics”), BLM should act to protect LWC by assuring that no new mechanized or motorized trails are established or designated in all areas where LWC is managed for the protection of wilderness characteristics.

Row 228

Adopt a final plan component that combines part of Alts A-D with a reversion to bicycle/mechanized travel management direction from the 2000 MMP. This would limit bicycles and mechanized travel to designated OHV routes or routes designated specifically for such use in this plan. Recommended language: “Limit mechanized travel and equipment to routes designated specifically for such use and routes where OHV use is allowed:

- No new mechanized routes would be designated in the outback or primitive area.

Row 228 Rationale

There is potential for direct and indirect impacts to Monument objects and values such as soils, cultural resources, vegetation, wildlife habitat, and wilderness and scenic values from mechanized travel, particularly in the more remote and natural management areas.

There is the potential for direct and indirect impacts to paleontological resources from unauthorized travel of OHVs and bicycles off these routes.

Row 229

Adopt the management direction from Alternative C in the final plan with additional language for each management area specifically prohibiting new nonmotorized recreational trails if they may impact wildlife habitat, fragile cryptobiotic soils, or cultural resources–all of which are Monument objects.

Row 229 Rationale

This Alternative protects Monument objects while still providing new and updated experiences for non-motorized recreational users by using the Management Area approach. These parameters are appropriate for each management area (Frontcountry, Passage, Outback, Primitive). However, nonmotorized trails of all forms still have the potential harm to wildlife, sensitive soils, and cultural resources. Therefore, BLM must caveat this management direction to also include prioritizing protecting these sensitive Monument objects when considering and designating new nonmotorized trails.

Row 230

Adopt language from the 2000 MMP with modifications:

With the exception of those segments listed below, maintain open routes within the disturbed travel surface area as of the date of this plan; prohibit widening, passing lanes, or other travel surface upgrades. Allow deviations from the current maintenance levels as follows:

• Hole-in-the-Rock Road: Allow stabilization of washout-prone areas, primarily along the southeastern end, to prevent erosion and sediment loading in drainages.

• Smoky Mountain Road: Allow stabilization in the Alvey Wash section to prevent erosion and sediment loading in drainages.

• Cottonwood Wash Road: Allow stabilization of washout-prone areas, primarily along the southern section, to prevent erosion and sediment loading in drainages.

• Skutumpah Road: Allow stabilization of washout-prone areas, primarily along the northern section, to prevent erosion and sediment loading in drainages (MMP 2000).

Row 230 Rationale

Currently, BLM's analysis of road maintenance and upgrades does not consider a reasonable range of alternatives, as Alts B-D include identical management direction, all of which allow significant improvements and upgrades to routes. There is no alternative similar to the 2000 MMP management direction, which highlighted specific maintenance exceptions for high-priority/ higher-use roads, but otherwise placed restrictions on any other activities in excess of routine maintenance. As currently written, this proposed management direction (the same language for all three potential alternatives) appears to give BLM nearly sweeping discretion to authorize county-proposed road improvements.

Row 231

Strike this management direction in the final plan entirely.

Row 231 Rationale

Currently, BLM's allowance of road maintenance and upgrades does not consider a reasonable range of alternatives, as Alts B-D include identical management direction, all of which allow (and indeed, seem to prescribe) significant improvements and upgrades to Hole-in-the-Rock Road, the Cottonwood Road, and House Rock Valley Road. We do not support a provision which would provide for improvements to Hole-in-the-Rock Road, Cottonwood Road, and House Rock Valley Road.

Row 232

Adopt the management direction in Alternative C in the final plan, but with the modification that the management direction that applies for Outback and Primitive Areas also applies to Passage Areas (i.e. public landings and takeoffs of motorized aircraft may only occur in the Frontcountry Area, with prohibitions articulated in Alt B.) Add additional criteria for where unmanned aircraft such as drones may be flown, prohibiting them from flying over Special Recreation Management Areas including popular hiking areas and developed campgrounds.

Row 232 Rationale

Please incorporate by reference our Scoping comments regarding aircraft here. It is important that motorized aircraft landings, takeoffs, and overflights by the public (including commercial operators/ SRP holders) are prohibited in not only the Outback and Primitive areas, but in passage zones as well. Most if not all of the passage zones within the Monument are often deep into the backcountry and in wild, quiet, infrequently visited areas and surrounded closely by Outback or Primitive areas. Particularly with helicopters, paramotors, and drones, it is certain that allowing aircraft landing and takeoff in the Passage area would significantly change the character of surrounding/ adjacent Outback and Primitive areas, from visuals to natural quiet soundscapes, to the benefits of these areas for wildlife habitat.

If motorized aircraft landing and takeoffs were allowed in the Passage area, a private helicopter or drone operator, for example, could potentially takeoff and land in a location along the Cottonwood Road, which, outside the road ROW, is completely surrounded by wilderness study areas for most of its length. Those aircraft would then fly over, potentially at a very low elevation, the very areas BLM seeks to protect by disallowing landing and takeoff anywhere. In short, unlike Front country areas, which are concentrated on the edges of the Monument, Passage areas occur throughout other sensitive areas and zones, and when the impacts of sound, visuals, and overall natural character are concerned, what occurs in the Passage areas has a major effect on a large portion of Primitive and Outback areas as well.

The management of motorized aircraft within the Monument is an important forward-thinking endeavor. Due to the nature and reach of many motorized aircraft today, prohibiting landing and takeoff in the Outback and Primitive areas *and* in the Passage areas that often bisect them (even in the far remote backcountry) protects visitor experience and safety, safeguards wildlife, and minimizes conflicts between user groups while protecting Monument objects like natural soundscapes, visual resources, and sensitive wildlife.

This management direction must also include drones. Drones impact the recreational experience of visitors, disrupt important wildlife behavior and habitat, and place at risk other monument objects through collisions and mechanical error. Drones can also be used to scout cultural sites in an effort to facilitate illegal activities damaging these sites.

In addition to where a drone can land, BLM has authority to manage where they can be flown. The MMP can prohibit some areas where they can fly (14 CFR § 107.45, 14 CFR § 107.145) Drones are not allowed to be operated over “human beings” and this includes areas frequented by public recreation use (14 CFR § 107.39). As with other aircraft, these regulations do not apply to search and rescue operations, firefighting, law enforcement use, or special permits for scientific study.

Lands and Realty

Protects Monument Objects:

- Lands within the Monument are withdrawn from future mineral entry.
- Acquire private inholdings within GSENM when possible from any willing seller.

Needs work:

- In the preferred alternative, ROW Exclusion areas should include all areas in the Monument outside the Frontcountry and Passage areas.

Areas where Monument objects are not protected:

- BLM should identify all orphaned and abandoned wells within the Monument and take necessary steps to plug these wells and reclaim the surface.

Row 240

We support this management direction. It is a basic requirement described in both proclamations. BLM should add clarification in the final plan to encompass the following:

- The oil and gas leases in the Circle Cliffs region have terminated by operation of law because the respective lessee(s) failed to pay their annual lease rentals. As a result, BLM shall take the necessary administrative actions to close each lease file and reject the pending applications to convert the leases to combined hydrocarbon leases (CHL)..
- For all existing oil and gas wells in the monument, the BLM will examine existing information, data, and changed circumstances to determine whether the wells are capable of production in paying quantities. If they are not, the BLM will take the necessary actions to ensure that the wells are plugged and abandoned and the surface reclaimed.
- The BLM will identify all orphaned and abandoned wells and take the necessary administrative actions to plug and abandon the wells and reclaim the surface.
- BLM should then ensure that the leases expire following the plugging of the wells.
- Publicly report information on wells, pipeline leaks, cleanup actions, and cleanup monitoring.

Row 240 Rationale:

From 1981-1983, several operators and lessees, including William C. Kirkwood, applied to convert their oil and gas leases to CHLs, which would allow them to extract oil, natural gas, and tar sand. BLM has failed to act on these applications. Critically, the operators and lessees failed to pay their annual rentals and as a result the leases included in the pending CHL applications have terminated by operation of law. BLM does not dispute this fact and the Utah BLM state office has confirmed as much with the Office of Natural Resources Revenue. This plan must recognize that the oil and gas leases in the Circle Cliffs no longer exist and direct the BLM to close the respective lease files and reject the CHL applications.

BLM's orphaned well program is an effort to plug wells, create jobs, and restore lands on federal, state, Tribal and private lands using $4.7 billion provided by the Bipartisan Infrastructure Law. Orphaned oil and gas wells are a category of unplugged nonproducing wells for which the operator is unknown, unavailable, or insolvent, leaving no responsible party to plug the well and restore the well site other than government agencies and the general public (Boutot et al. 2022). As of 2022, there were 123,318 documented orphan wells in the

continental U.S. This orphaned well program seeks to invest funds to plug high-priority orphaned oil and gas wells to improve public health and safety, reduce the impacts of water and air pollution on disadvantaged communities, and enhance the experience for visitors to public lands, national parks, refuges and forests.

The BLM uses a number of factors to qualify a well as an orphan well. BLM uses four major factors and past history to score a well from 1 (conditions good) to 5 (conditions seriously impaired). The first factor gives a higher score for wells in dense populated areas. The Upper Valley area is in a very low population area. The next factor concerns environmental conditions. This factor notes the location and influence of the well on surface and ground water resources. Harm to wildlife and livestock increase the score. If noxious weeds are present, the score further increases. The fact that these are within a National Monument should increase this score. The third factor assess the years in service of the well noting current mechanical integrity. Older wells like those in this field receive a high score. Surface equipment present, especially tanks, raises this score. The fourth factor assesses the number and volume of spills. Well venting or leaking is also reviewed adding to the total score.

There is very little information in the DEIS or the AMS about these mineral leases. Include in the final EIS updated maps of leases and wells with their lease and well identification. Older BLM lease maps online date to 1962.(BLM. 1962).

As BLM knows, the Upper Valley field has a history of oil spills, including as recently as this summer. These spills have impacted the objects of the monument and action is required.

Row 245, 246, and 247

BLM should adopt a combination of the management direction between Alternatives B/C, and D. Specifically, designating and maintaining the majority of the Monument as an ROW exclusion area, including WSAs, lands managed for protection of wilderness characteristics, RNAs, ACECs, the OSNHT National Trail, within the Primitive area, areas with a high probability for cultural resources according to BLM Class I inventory, designated critical habitat for threatened & endangered species, and suitable wild and scenic river corridors. Maintain the Congressionally-designated corridor along U.S Hwy 89 and the Section 368 corridor 69-116 as ROW open areas or seasonal avoidance areas, and manage all other lands within the Monument as ROW avoidance areas. Adopt Row 247's language in Alternative D directing that to allow an ROW in an avoidance area, the ROW must be compatible and enhance the protection of GSENM objects and would not otherwise be feasible in an open area.

Row 245, 246, and 247 Rationale:

This proposed ROW framework fits best with the original intent and execution of the 2000 MMP, allowing utility rights-of-way and communication sites if absolutely necessary and with no conflicts to Monument objects and resources. It also highlights specific areas that may have stronger conflicts with proposed utility and communication ROWs and sites and excludes these areas from ROW entry and siting, and sets the clear standard that even in non-exclusion areas, protection and enhancement of Monument objects is still the primary purpose of Monument management.

Areas of Critical Environmental Concern (ACECs)

Protects Monument Objects:

- The preferred alternative agrees to carry forward portions of the Warm Creek and Willis Creek nominations.

Needs work:

- The assessment of the relevance and importance of nominated ACECs and RNAs is not consistent between nominations, and proposals were rejected without adequate explanation.
- The information in Appendix H, Table H-1 is summary only, without full rationale for several rejections of nominated ACECs.

Areas where Monument objects are not protected:

- The high concentration of rare and BLM Sensitive plants in Lick Wash in the Willis Creek ACEC deserve protection and are at risk from trespass OHV use and increased recreation.
- The various GSENM resource management plans have often declined to designate ACECs because the entire planning area was intended to be given ACEC protections. As past management has shown, however, this has not been the case on the ground. Neither current nor proposed management are adequate to protect these values. The Monument as a whole has not been managed as an ACEC, despite direction in the 2000 plan; therefore, special protection for the areas proposed in our scoping comments is appropriate.
- The DEIS itself discusses the impacts of declining to protect fragile and unique Monument objects with ACECs in its analysis of the no action alternative on page 3-345 to 3-346:

> "the potential ACECs not designated would see their relevant and important values subject to potential impacts by not having specific

> management actions present. These could include not managing potential ACECs as VRM Class II, which would allow scenic and visual resources to be impacted through management activities including only partially retaining the existing character of the landscape and the level of change allowable to the characteristic landscape being moderate. Camping and campfires would continue being allowed in undesignated potential ACECs, which could lead to destructive fire impacts on all the identified relevant and important values. Recreational target shooting would continue being allowed, which could lead to trammeling of vegetation values. The undesignated potential ACECs would not be managed as ROW exclusion, opening the areas to ROW development, which could impact the paleontological, geological, scenic, cultural, vegetation, and scientific opportunity values through construction and development of ROWs. Scientific research would not be facilitated, which could prevent new discoveries. The undesignated potential ACECs would be available for livestock grazing, and coordinated monitoring plans would not be developed with grazing permittees, leading to potential impacts from livestock grazing such as trammeling of vegetation values and potential destruction of paleontological, geological, cultural, and scientific research values. The undesignated potential ACECs would not be closed to OHV use, which could lead to impacts from OHV use and increased recreational visitation, including trammeling of vegetation values and potential destruction of paleontological, geological, cultural, and scientific research values."

Further, the DEIS predicts that climate change and increased recreation could impair the relevant and important values of these areas (DEIS p 3-344), and that not designating them as ACECs could impact their relevant and important values could be impacted by not having specific management actions present (DEIS page 3-348).

Alternatives Comparison

Row 261

We support Alternative B's designation of the Warm Creek ACEC.

Row 261 Rationale

First, the assumption that monument management in Alternative C or D provides enough protection overall that ACECs are not necessary is not borne out by experience. These areas need additional protections.

Second, the nominated Warm Creek ACEC meets the criteria for relevance and importance as defined in 43 CFR 1610.7 and BLM Manual 1613, Areas of Critical Environmental Concern (BLM 1988).

Relevance: There shall be present a significant historic, cultural or scenic value; a fish or wildlife resource or other natural system or process; or a natural hazard.

Importance: Has qualities or circumstances that make it: fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change

Our scoping comments contained a thorough description of the values in the proposed ACEC (see Scoping Comments, Appendix C pp 4-8). An ACEC with seven rare plant species (five of which are endemic to GSENM), seven Sensitive or otherwise significant animals, archaeological resources, and scenic values has met the cultural, scenic, wildlife resource, and natural system values. Rare and sensitive species and archaeological sites are fragile, sensitive, rare (by definition), threatened, vulnerable to adverse change, and irreplaceable (especially in the case of cultural resources).

Further, the 2022 Analysis of the Management Situation (p 6-8) says that "Consideration will be given to general vegetation, *federal- and state-listed species, and Natural Heritage Program plants and plant communities*."

- Broadleaf Gilia (Aliciella latifolia subsp. imperialis) - imperiled with a declining trend; endemic to SE Utah
- Kaiparowits milkvetch (Astragalus malacoides) - endemic to GSENM (the Kaiparowits Plateau)
- Atwood's camissonia (Camissonia atwoodii) - endemic to GSENM (Smoky Hollow)
- Hole-in-the-Rock prairie-clover (Dalea flavescens var. epica) **BLM State Sensitive**, endemic to SE Utah.
- Paria spurge (Euphorbia nephradenia)- **BLM UT State Sensitive** - endemic to shale barrens in E UT.
- Nipple Bench scorpion-weed (Phacelia mammillarensis) - Endemic to GSENM (the foothills of the Kaiparowits Plateau)
- Pavement phacelia or beautiful scorpionweed (Phacelia pulchella var. sabulonum) - restricted to GSENM (the Kaiparowits Plateau and Cottonwood Wash area)
- Smoky Mountain globemallow (Sphaeralcea fumariensis) - **BLM UT State Sensitive** - endemic to Smoky Mountain areas of GSENM.

Utah Sensitive Species:

- Allen's Big-eared Bat (Species of Special Concern)
- Townsends Big-eared Bat (Species of Special Concern)
- Common Chuckwalla (Species of Special Concern)

- Desert Night Lizard (Species of Special Concern)
- Northern Goshawk (Conservation Agreement Species)
- Great Plains Toad (Species of Special Concern)

Other Relevant Species and Habitat:

- Desert Bighorn Sheep
- Pronghorn

Row 262

We support Alternative B to designate the Willis Creek ACEC.

Row 262 Rationale

First, the assumption that monument management in Alternative C or D is so protective overall that ACECs are not necessary is not borne out by experience. These areas need additional protections.

Second, the nominated Willis Creek ACEC meets the criteria for relevance and importance as defined in 43 CFR 1610.7 and BLM Manual 1613, Areas of Critical Environmental Concern (BLM 1988).

Relevance: There shall be present a significant historic, cultural or scenic value; a fish or wildlife resource or other natural system or process; or a natural hazard.

Importance: Has qualities or circumstances that make it: fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Our scoping comments contained a thorough description of the values in the proposed ACEC (see Scoping Comments, Appendix C pp 17-25). An ACEC with eight rare plant species, seven Sensitive or otherwise significant animals, archaeological resources, and scenic values has met the cultural, scenic, wildlife resource, and natural system values. Rare and sensitive species and archaeological sites are fragile, sensitive, rare (by definition), threatened, vulnerable to adverse change, and irreplaceable (especially in the case of cultural resources).

This ACEC contains Lick Wash, which has six disjunct, endemic, or BLM Sensitive plants within a two-mile canyon. This concentration of special status plants in such a small area is quite unique. According to BLM staff, OHVs sometimes trespass through this area and it is popular with hikers. Lick Wash alone merits protection as an ACEC and management to restrict the passage of vehicles from either end.

Further, the 2022 Analysis of the Management Situation (p 6-8) says that “Consideration will be given to general vegetation, *federal- and state-listed species, and Natural Heritage Program plants and plant communities*.”

- Pinnate spring-parsley (Cymopterus beckii) – **UT BLM Sensitive**; disjunct population in Lick Wash, rare in Capitol Reef and scattered sites in E UT/NE AZ – (formerly reported as Aletes macdougalii)
- Canaan daisy (Erigeron canaani) on Lick Wash sandstone, disjunct from Zion NP, S UT endemic
- Cronquist's phacelia (Phacelia cronquistiana) **UT BLM Sensitive**; endemic to S UT, gypsophile
- Escarpment milkvetch (Astragalus striatiflorus) **UT BLM Sensitive**; sandstone cliffs of Lick Wash
- Kodachrome bladderpod (Physaria tumulosa); **listed endangered (Endangered Species Act**) Recently documented from Navajo sandstone on Deer Spring point, as well as Carmel Formation near Cannonville, narrow endemic
- Kodachrome peppergrass (Lepidium montana var. stellae) S UT/N AZ endemic, gypsum beds
- Lori's columbine (Aquilegia loriae) endemic to Lick Wash and adjacent canyons
- Paria River Indian-breadroot (Pediomelum pariense) endemic to Zion and GSENM areas of S UT, Carmel limestone.
- Sandloving penstemon (Penstemon ammophilus) – sand dune endemic of S UT
- Stella's evening-primrose (Oenothera cespitosa var. stellae) – endemic to E UT
- Zion daisy (Erigeron sionis) – endemic to Zion NP, with one disjunct population in Lick Wash
- Zion draba (Draba asprella) – endemic to Zion NP vicinity, with one disjunct population in Lick Wash.

The area contains the following additional wildlife resources and associated habitat:
- Utah Prairie-dog (Federally listed Threatened)
- Utah Sensitive Species:
  - Northern Goshawk (Conservation Agreement Species)
  - Arizona Toad (Species of Special Concern)
  - Fringed Myotis Bat (Species of Special Concern)
  - Greater Sage Grouse (Species of Special Concern)
- Other Relevant Species and Habitat:
  - Black bear
  - Elk
  - Wild Turkey
  - Pinyon Jay, a species proposed for listing under the Endangered Species Act

We respectfully ask that you re-evaluate these ACEC proposals. They contain extraordinary values. The only other option would be to choose management under Alternative D, which provides more protections for objects by virtue of its higher restrictions on discretionary activities. Designating the smaller areas proposed is a management compromise between managing the entire planning area as an ACEC and the preferred alternative.

Research Natural Areas (RNAs)

Protects Monument Objects:

- Designation of the Little No Mans Mesa RNA (ACEC).
- Designation of the No Mans Mesa RNA (ACEC).

Needs work:

- Designate the proposed 327-acre Spring Point RNA (ACEC).
- All RNAs/ACECs should be managed as right-of-way exclusion areas.

Areas where Monument objects are not protected:

- Designate the Fiftymile Mountain RNA (ACEC), but make the area unavailable for livestock grazing and prohibit campfires.
- Designate the Big Bowns Bench RNA (ACEC).
- Designate the Smoky Mesa RNA (ACEC).

Alternatives Comparison

Row 263

Adopt the language from Alternatives B/C in the final plan, but add the following management direction:

- Closed to motorized OHV use

Row 264

Designate ~~Little~~ Spring Point RNA (ACEC) in the final plan, but designate the proposed 327-acre area. In addition, add the following management direction:

- Closed to motorized OHV use

Row 264 Rationale

Appendix H states that only portions of the nominated Little Spring Point RNA meet the relevance and importance criteria, namely that portion of the nominated area in the Boot Allotment (p. H-7). However, based on an on-the-ground inspection of the area, this is not accurate. The portion of the nominated area in the Timber Mountain allotment meets the relevance and importance criteria equally as well as the portion in the Boot allotment, namely, by serving as an undisturbed (ungrazed) control area for research. The portion of the nominated area in the Timber Mountain allotment shows no signs of recent cattle use. Based on the topography, if there was any cattle use in the distant past, animals likely had to be forced up a very steep slickrock ramp that they would likely not ascend of their own accord. Furthermore, the portion of the nominated area in the Timber Mountain allotment is an

isolated island that is inaccessible from the rest of the allotment on Timber Mountain itself, separated by a sharply descending ridge of Navajo Sandstone with vertical drops that a cow could not navigate without a high likelihood of serious injury or death.

In addition, regarding relevance, the mesas' natural system and processes as relict plant communities are of significant value. Regarding importance, the relict plant communities have substantial significance and value since they are among the very few areas in the entire monument with intact vegetation communities undisturbed by land uses since European settlement. This constitutes more than just local significance that gives Spring Point special worth and distinctiveness (H.2.2 #1, p. H-2), and make it rare, exemplary, unique, and vulnerable to adverse change (H.2.2 #2, p. H-2).

The special management attention currently in Row 264, with the proposed addition of closure to motorized OHV use, is necessary to protect the important and relevant values of the portion of the nominated area in the Timber Mountain allotment in addition to the portion in the Boot Allotment.

Row 265

Adopt the language from Alternatives B/C in the final plan, with the addition of the prohibition of campfires and making the area unavailable for livestock grazing.

Row 265 Rationale

We strongly support the establishment of the Fiftymile Mountain RNA to protect cultural resources. We believe that campfires should be prohibited in this RNA, as in others, as it would reduce the likelihood of human-caused fire which could potentially put cultural resources at risk. Visitors might also unknowingly build campfire rings with architectural stones, so a ban on campfires could protect cultural resources in this way as well.

We would like to reiterate that Zweifel noted livestock presence at almost every site he visited in the Rock Creek-Mudholes allotment, with adverse grazing impacts noted at 61% of sites in his survey. He also noted that those sites not suffering direct grazing-related impacts were generally suffering from advanced erosion due to a lack of ground vegetation, a secondary impact resulting from grazing. (Zweifel, 2016) While we acknowledge that impacts will inevitably vary across the RNA, it is, to the best of our knowledge, the only data that exists regarding livestock impacts on cultural resources within the RNA. We appreciate that the BLM has proposed this RNA and has included a requirement for adaptive management thresholds regarding grazing and its impacts to cultural resources. The BLM claims that they cannot propose closure of an area without data to support it. We assert not only that there is sufficient data, but that the data is convincing and irrefutable. Livestock presence was reported at every site. Adverse impacts at 61% of sites. If that wouldn't trigger adaptive management, what will?

As noted elsewhere in these comments, this is an extremely difficult area to access and monitoring would take many years, if it happens at all. With the current levels of livestock presence and adverse impacts, we assert that unacceptable levels of damage to non-renewable resources will be done by the time that happens. Regarding BLM's failure to close Fiftymile Mountain RNA to grazing, the agency is offering an explanation for its decision that runs counter to the evidence before it. In the final EIS the BLM must either close the area, or offer a reasoned explanation based on the data presented as to how continued grazing is in compliance with BLM's obligations to protect cultural resources and Monument objects.

Row 266

Adopt the language from Alternatives B/C in the final plan, but add the following management direction:

- ROW exclusion area

Row 266 Rationale

ROW exclusion is included amongst the management direction for all the other RNAs being considered. Given the topography surrounding No Mans Mesa, and the importance of retaining the natural state of No Mans Mesa for ecological and scientific reasons, right-of-ways should not be located on the top of/across No Mans Mesa.

Add New Row 1

Management Direction:

Designate **Smoky Mesa RNA (ACEC)** to protect vegetation resources and scientific opportunity. Apply the following management:

- Unavailable for livestock grazing
- Closed to motorized OHV use
- Prohibit campfires
- Prohibit camping
- ROW exclusion
- Facilitate scientific research
- Prohibit recreational target shooting

New Row 1 Rationale

Appendix H states that Smoky Mesa RNA meets the relevance but not the importance criteria. It states: "Because there is no threat to the unusual vegetation on Smoky Mesa, it does not meet importance criteria" (p. H-7). Appendix H also states that the plant community dominated by Utah juniper and single-leaf ash on Smoky Mesa is unusual, but is not under threat by existing uses.

We believe that there are potential threats to the vegetation on Smoky Mesa, including livestock grazing, camping and campfires, right-of-ways, and target shooting. For example, campfires and target shooting have the potential to start a fire that could eliminate the unusual vegetation on Smoky Mesa.

In addition, the importance criteria can be met by serving as an undisturbed control area for research, which applies to Smoky Mesa particularly well given its unique vegetative community. This is a prime site to study old-growth juniper trees through the various lenses of dendrochronology.

Regarding importance, Smoky Mesa's relict plant community has substantial significance and value since it is among the very few areas in the entire monument with intact vegetation communities undisturbed by land uses since European settlement. In addition, it is the only old-growth juniper/singleleaf ash community of its kind that we are aware of. This constitutes more than just local significance that gives Smoky Mesa special worth and distinctiveness (H.2.2 #1, p. H-2), and make it rare, exemplary, unique, and vulnerable to adverse change (H.2.2 #2, p. H-2).

The special management attention proposed above is necessary to protect the important and relevant values of the Smoky Mesa RNA.

Add New Row 2

Management Direction:

Designate **Big Bowns Bench RNA (ACEC)** to protect vegetation resources and scientific opportunity. Apply the following management:

- Unavailable for livestock grazing
- Closed to motorized OHV use
- Prohibit campfires
- ROW exclusion
- Facilitate scientific research
- Prohibit recreational target shooting

New Row 2 Rationale

Appendix H states that Big Bowns Bench RNA meets the relevance but not the importance criteria. It states that "with grazing no longer an issue, current management is sufficient for protection" (p. H-8).

We do not think that current management is sufficient for protection. Threats to Big Bowns Bench include campfires, right-of-ways, and target shooting. For example, campfires and target shooting have the potential to start a fire that could eliminate the unique reference vegetation on Big Bowns Bench. Target shooting across Big Bowns Bench is not prohibited in multiple alternatives in the DEIS (Appendix A, Figures 2-22 and 2-23). The alternatives include areas on

Big Bowns Bench designated as open to right-of-way authorization and as right-of-way avoidance areas, either of which could permit right-of-way authorization on Big Bowns Bench (Appendix A, Figures 2-30, 2-31, and 2-33).

In addition, the importance criteria can be met by serving as an undisturbed control area for research, which applies to Big Bowns Bench since it has been ungrazed for over 20 years. Appendix H states: "Big Bowns Bench is useful as a reference area" (p. H-8). There are a few other sites in the monument that are even less disturbed, but these are of limited acreage. Big Bowns Bench could be a unique reference area both because of its size, and because the time since it was grazed is intermediate compared to relict sites, which would allow for unique research and comparison to other sites on the monument.

Regarding importance, the Big Bowns Bench plant community has substantial significance and value since it is among the very few areas in the entire monument with intact vegetation communities undisturbed by land uses such as cattle grazing and motorized vehicles. The plants, wildlife, soil and hydrologic values of Big Bowns Bench are fragile and vulnerable to impacts from human activities as well as climate change. This constitutes more than just local significance that gives Big Bowns Bench special worth and distinctiveness (H.2.2 #1, p. H-2), and make it fragile, sensitive, rare, exemplary, unique, and vulnerable to adverse change (H.2.2 #2, p. H-2).

The special management attention proposed above is necessary to protect the important and relevant values of the Big Bowns Bench RNA.

Science

Protects Monument objects:

- We commend the BLM's stated goal of fulfilling the vision of GSENM as a premier outdoor laboratory and a place for understanding our environment, our history, our planet's past, and our place in the universe. We support the management direction of row 294 that states: Design scientific research projects to avoid impacts on and advance the protection of GSENM objects.

Needs work:

- None of the objectives or management directions in the alternatives contain the vision or specificity required to achieve the goal of fulfilling the vision of GSENM as a premier outdoor laboratory and a place for understanding our environment, our history, our planet's past, and our place in the universe.

Areas where Monument objects are not protected:

- Notably, there is only one mention in this section about the relationship between science and the protection of Monument objects. We believe that this should be a central and guiding principle for all science in the monument and that it is under-addressed. While objects at risk of being lost over the short-term are prioritized, there is no consideration given to prioritizing the protection of non-renewable resources, which puts a significant number of objects at risk.

Alternatives Comparison

Row 293

Adopt the language from Alternatives B/C/D in the final plan, with the following modifications (in italics): "Ensure best available scientific information *on how to protect Monument objects and values, including Indigenous Knowledge,* is a primary foundation for all management decisions."

Row 293 Rationale

The Executive Summary of the DEIS includes the use of GSENM as an outdoor science laboratory as part of the primary purpose of the management plan (ES-1), and states: "Science is the foundational purpose of GSENM" (ES-2). Thus, it is fitting and appropriate that the best available scientific information be a primary foundation for management decisions.

The use of a transparent process, coupled with the selection of qualified and independent peer reviewers, should improve the quality of science while promoting public confidence in the integrity of the scientific products.

Peer review is one of the important procedures used to ensure that the quality of published information meets the standards of the scientific and technical community. It is a form of deliberation involving an exchange of judgments about the appropriateness of methods and the strength of the author's inferences. Peer review involves the review of a draft product for quality by specialists in the field who were not involved in producing the draft. Agency staff are considered to have a conflict of interest when reviewing agency analysis.

Peer review typically evaluates the clarity of hypotheses, the validity of the research design, the quality of data collection procedures, the robustness of the methods employed, the appropriateness of the methods for the hypotheses being tested, the extent to which the conclusions follow from the analysis, and the strengths and limitations of the overall product. Peer review should not be confused with public comment and other stakeholder processes. The selection of participants in a peer review is based on expertise, with due consideration of independence and absence of conflict of interest.

Traditional Knowledge from Tribal representatives will not be subject to peer review. When one examines the purpose of the peer review process, it aims to independently verify the validity of said knowledge. TK has been subject to generations of community review and independent verification. TK doesn't get passed down or shared unless it has had the review and the verification of the community. Traditional Knowledge will not be subject to processes of Western science or standards; it shall be honored on its own ground. "Indigenous researchers have often had to explain how their perspective is different from that of dominant system scholars; dominant scholars have seemingly needed no such justification in order to conduct their research." (Wilson, 2008, p.55)

Further, the Western scientific method should not be applied to anything pertaining to Traditional Knowledge or Indigenous science, though Indigenous scholars may choose to conduct research using the Western scientific method. From Indigenous scholar Shawn Wilson: "Part of the importance of developing an Indigenous research paradigm is that we can use methods and forms of expression that we judge to be valid for ourselves. We can get past having to justify ourselves as Indigenous to the dominant society and academia. We can develop our own criteria for judging usefulness, validity, or worth of Indigenous research and writing. We can decide for ourselves what research we want and how that research will be conducted, analyzed, and presented."(Wilson, 2008, p.14)

We recommend that the BLM research Indigenous Data Sovereignty, the CARE principles of Indigenous Data Governance, and the United Nations Declaration on the Rights of Indigenous Peoples.

Row 294

We support Alt B/C/D and the BLM's intention to design scientific research projects to avoid impacts on and advance the protection of GSENM objects.

Row 294 Rationale

In a changing world and as the first science national monument specifically designated for science, it is the BLM's responsibility to maintain a commitment to protection of Monument objects and values, and creativity and intellectual innovation in the process of doing so. We look forward to the research that will be done in the monument in the service of protecting Monument objects and values.

Row 295

We support Alt B/C/D/ with the following modifications (in italics):

Prioritize inventory of and basic*, applied, and Indigenous* research on GSENM objects in danger of being lost over short timeframes (100 years or less) over those that are more stable in the long term. *Prioritize inventory of and basic, applied, and Indigenous research on non-renewable*

GSENM objects. Objects and values at the nexus of non-renewable and danger of being lost over short timeframes will receive highest priority.

Row 295 Rationale

We encourage the BLM to consider specifically the damage done to archaeological resources prior to the time when surveys began in earnest, we believe around the 1960s. Many archaeologists have mentioned that most of the adverse impacts from livestock happened before this time, when AUMs were unmanaged. Since that time period between the introduction of livestock grazing and AUM management was closer to 60 or 70 years than 100 years, we propose that adverse impacts to cultural resources is an immediate, short-term risk.

We also invite the BLM to think about ecological resiliency across resource areas in a changing climate. Pinyons and their partner, the pinyon jay, seem to be in a time of shifting stability and increased risk. The BLM should consider all the cumulative impacts and risks to a resource when evaluating if it is at short-term or long-term risk, as well as if it is a renewable resource or not. While trees and forests have always traditionally been renewable, it's quite possible that it's time to start considering that they might not be. The same could apply to water resources, biocrust, and a number of other Monument objects. We suggest an analysis and evaluation prioritization process to be included in the science plan and that the public may be involved in, that the BLM may benefit from the plethora of research being done by outside experts.

Row 296

We support the language in Alternatives B/C/D, with the following modifications (in italics):

Actively promote basic ~~, and~~ applied*, and Indigenous* science on GSENM resources and objects and disseminate the findings of such research.

Row 296 Rationale

According to the BLM, basic science is science for the sake of knowledge and applied science is to inform management (loose definitions as interpreted from presentations). We propose recognizing Indigenous science as its own category. An Indigenous research paradigm is fundamentally different from a Western paradigm in that it is grounded in a fundamental belief that knowledge is relational, rather than knowledge being that which can be gained or owned by an individual (Wilson (2001)as cited in Steinhauer (2002)). "Indigenous people have come to realize that beyond control over the topic chosen for study, the research methodology needs to incorporate their cosmology, worldview, epistemology, and ethical beliefs. An Indigenous research paradigm needs to be followed through all stages of research." (Wilson,2008, p.15)

Since no one has seen the science plan, we do not know if or how the BLM is categorizing and prioritizing the science that will happen on the monument or the way information will be used. Since Indigenous research is distinct from basic or applied science and may move back and

forth between them or be both or be neither, we propose the inclusion of Indigenous science as its own category.

Row 298

Adopt the language from Alternatives B/C/D in the final plan.

Row 298 Rationale

We support the development and maintenance of a science plan that is informed by Indigenous knowledge, as the language in the Alternatives Matrix states. However, through conversations throughout this process, we understand this to be a primarily administrative document which will not include any Tribal input or Indigenous knowledge. While we respect the BLM's stated intention at the outset for the science plan to be inclusive and informed by Indigenous knowledge, the actual development of the plan without Tribal input has resulted in misunderstanding around the plan. To remove the inclusion of Indigenous Knowledge in the final draft will only exacerbate the issue.

With the development of the Tribal Co-Stewardship Plan coming in the future, we believe it will be important to Tribes to know now that their input will be incorporated throughout the final management plan, and their Traditional Knowledge honored. The science plan is a good place to outline how that will happen, and it feels like a missed opportunity to make it just an administrative procedure document. To that end, we offer the following suggestions:

We request adding the following to the science plan:

Science should be a collaborative process, subject to peer review or the equivalent within Tribal Nations, and be based on objective measurable data in the case of Western science. Indigenous Knowledge is relational and generally acknowledges subjectivity, so may or may not rely on objective data or metrics.

All agency resource management practices and methods used in the monument should be scientifically validated or validated by Tribal Nations.

Scientific studies must be reviewed by the full range of scientists and experts in the field including the cultural bearers of Tribal Nations. These scientists and Traditional Knowledge Holders should be independent of BLM and without conflict of interests.

Conflict of interest is any association that could impair the reviewer's objectivity or could create an unfair competitive advantage for a person (OMB 2004). These conflicts also include those stemming from ties to agency staff and manager, related businesses, and other stakeholders.

These work processes have an essential nexus to the BLM's science-land management integration, including (Kitchell et al 2015):

• Assess condition and status. (Identify impairment of Monument objects).

- Perform planning.
- Authorize use.
- Implement BLM actions.
- Manage compliance.
- Perform monitoring.

The monument should maintain an online publicly accessible database of ongoing scientific investigations, and when the studies are completed acquire the final paper/report/publication. After a reasonable period of time, these studies should be provided to the public free of charge. Also after a reasonable time, any data used in the study be submitted to BLM and be made available to the public. Tribal Nations, representatives, researchers, and community members directing or conducting research or providing Indigenous Knowledge will be fully informed of how their data will be managed and will have control over its use to the extent legally possible.

The science plan should identify key recreation uses that are most likely to impact Monument objects and promote scientific studies that relate recreation with object impairment. It should identify threshold levels of recreation use that when reached may impair these objects. These study needs may vary because of the diversity of special recreation management areas.

We are poised at a unique moment of opportunity for research, and research around grazing impacts is no different. As we have discussed in the contexts of grazing, soil, and water, Rangeland Health Assessments are inadequate for the proper protection of Monument objects. The effects of grazing on Monument objects should be a priority for BLM as it moves forward with the science plan. Both large, landscape-scale reference areas and exclosures should be utilized to control for grazing impacts at multiple spatial scales and at varying lengths of time since the cessation of grazing.

Supporting life for fifty percent of the rare flora in Utah and 125 species of plants that occur only in Utah or on the Colorado Plateau, GSENM is a haven for rare, endemic, native, and relict plants. It offers unparalleled research opportunities, both for the rare plant communities and for the restoration potential as adverse impacts from discretionary actions are removed from the landscape. We encourage and support the BLM in pursuing and supporting both preservation and restoration of native plant communities.

According to the BLM's own estimates, only approximately 5-6% of the monument has been surveyed for cultural resources. Grand Canyon Trust, through field visits, has found archaeological sites open to damage from livestock grazing that we believe the BLM to be previously unaware of. We suggest that the draft RMP be modified to include specific, measurable, and time-bound goals regarding cultural resource inventories. We support the recommendation in Appendix D for closures as scientific control: "Closure of certain areas can act as a scientific control for comparison to areas left open to free access. This would be an important aspect when considering livestock or OHV effects, both direct (livestock or OHVs on

the sites) and indirect (such as erosion exacerbated by livestock or OHV use), as compared to other adverse effects. Restrictions for scientific purposes should be planned to take full advantage of the research potential. Areas with a variety of site types should be considered, but the restricted and open portions of the research areas should be as similar as possible in the geographic and cultural landscapes. This allows the researcher to make a parallel comparison." (Appendix D, p. D-13)

Further, it is important to recognize that affiliated Tribal Nations have maintained varying degrees of connection with this significant cultural landscape. Tribal Nations need time to re-establish connection with this landscape and Monument objects and values. On Tribal timelines and according to Tribal desire, the BLM should conduct ethnographies with an ethnographer of each Tribal Nation's choosing. Ethnographies will aid in contextualizing consultation and co-stewardship and are a critical component of culturally responsive and responsible land management.

As the BLM is well aware, water in an arid land is scarce and precious. As a monument object and of exceptionally high ecological and cultural value, it is of the utmost importance that the best available Western science and Indigenous Knowledge be used to protect it. As the science monument, none is better positioned to do so than GSENM. We propose that the BLM use the science plan to guide the development of new assessment methods. As discussed in the Water Resources section above, current metrics (rangeland health and Proper Functioning Condition assessment) are inadequate to fully and properly assess the health of hydrologic systems. We also request that the BLM consider the synergistic impacts that cattle grazing can have with climate change in relation to water availability. These impacts by cattle on hydrologic processes are expected to be exacerbated by and synergistic with climate change. There is no suggestion of conducting field assessments specifically to identify places where water quality is impaired. There are no measures in place to maintain watershed health post-restoration. The science plan should also address complete hydrologic analysis for all proposed and existing wells, as outlined in line 58. Finally, we encourage the BLM to look beyond merely protecting Monument objects and values from adverse impacts, but to be proactive, look to the future, and consider innovative restoration projects that will not just protect and maintain, but restore values associated with Monument objects and values.

Biological soil crust is a critical monument object that needs to be better understood. While harvesting biocrust prior to surface disturbance and researching restoration techniques are examples of the science-based management and innovation for which GSENM was designated and we commend the BLM for such direction, the Final EIS should contain more detailed plans for soil monitoring and triggers for mandatory actions as well as consequences for failure to meet objectives. As part of this Monument's science program, review, validate, and revise rangeland health assessment methods to adequately protect Monument objects, including biocrust.

Regarding wildlife, the science plan should include guidance for pinyon jay surveys as described in the Fish and Wildlife section of this document. Culturally significant species to Tribes should be identified to the degree which Tribal Nations desire to disclose, as part of the knowledge-gathering process of the science plan.

As described above, there is also a critical need to periodically conduct science-based inventories and monitoring as part of visual resource, dark sky, and soundscape management. The inventories and monitoring can and should include best practices for including Tribes, Tribal Knowledge, universities, and other contributors. Including components in the science plan for carrying out such inventories and monitoring will increase the efficiency and effectiveness of the efforts, providing increased transparency, integration, and opportunities for collaboration.

We recommend starting over with the science plan, including Tribes from the beginning, and using the science plan as an opportunity to detail *how* Indigenous knowledge will be incorporated throughout the entirety of the RMP, and of course encourage the BLM to consult with associated Tribal Nations as to how this should happen. As the "science monument," the agency should see the science plan as an opportunity to uphold its mission and commit to fostering the best available science that will support and enhance the protection of Monument objects and values.

Climate Change and Carbon Sequestration

Protects Monument Objects:

- We are glad to see the urgent topic of climate emissions and carbon sequestration addressed in the DEIS.

Needs work:

- The analysis of the carbon sequestration potential of vegetation projects and grazing needs more detail and more scientific support for its conclusions. This topic would benefit from citing more than one source.

Areas where Monument objects are not protected:

- Livestock grazing and vegetation projects can and have significantly impacted Monument objects and values. Therefore, GSENM needs accurate information to weigh risks and benefits of these actions. Carbon sequestration research is rapidly changing. We suggest working with specialists in the field for the most up-to-date information on the carbon sequestration effects of management activities.

Carbon Emissions

The analysis of alternatives for carbon emissions says Alternative D is the most protective of GSENM resources. This is because methane emission from livestock grazing is the primary

source of greenhouse gasses on the monument. It also spreads noxious weeds and reduces soil nutrients, which hampers carbon storage and increases climate change impacts (DEIS at 3-18, 3-19). Alternative D calls for the lowest amount of livestock AUMs, which results in fewer methane emissions, weeds, and soil impacts. We prefer that Alternative.

The DEIS concluded that livestock grazing would account for more than 90% of the climate-forcing pollution caused by the Monument plan. DEIS at 3-19. The DEIS concludes that the annual social cost of carbon caused by Plan emissions at the middle discount rate of 3% would be $398 million annually under Alternative A, $365 million annually under Alternative C, and $224 million annually under Alternative D. DEIS at 3-24 – 3-25. In other words, allowing grazing to remain at current levels would result in about $250 million under Alternative A, or over $1 billion in climate damage every three years; cutting grazing levels in half, as Alternative D would do compared to Alternative A, would reduce the Monument Plan's climate damage by more than half a billion dollars over that three year period.

Further, this analysis demonstrates that the carbon damage from livestock grazing far outweighs several measures of the economic value of such activity. The DEIS states: "Under Alternative A, the economic contribution from approximately 78,256 estimated billed AUMs could result in approximately 51 total jobs, $2 million in labor income, $2.5 million in value added, and $6.8 million in economic output (see Table 3-116)." DEIS at 3-382. Thus, all of livestock grazing's annual economic benefits quantified for Alternative A – adding labor income, value added, and economic output – is $11.3 million, while grazing's annual climate costs are over $350 million, more than 30 times larger.

We request that BLM make this comparison explicit in the EIS, and compare side-by-side the climate costs (via the social cost of carbon) vs. the economic benefits of livestock grazing on the Monument. This stark contrast will provide a further basis for reducing livestock grazing there.

Carbon Sequestration

Vegetation Projects

The Analytical Conclusions to Be Answered on DEIS page F-9 asks if and how carbon storage capacity would differ among the alternatives. This is a difficult topic to analyze. It's a new field and data are just beginning to emerge. The carbon sequestration potential of ecosystem components like early seral stage plant growth, intact large trees, biocrust, etc. is not settled. Nonetheless, the DEIS states confidently in the analysis of alternatives that vegetation treatments improve vegetation health and increase carbon sequestration, and more active vegetation management through mechanical removal of woodlands will sequester more carbon (3-20 to 3-22, 2-132). No further details or supporting data are provided. It's possible that the DEIS is referring to the rapid growth of early seral stage vegetation after treatment, which does pull carbon from the atmosphere. However, this calculation does not take into account the

carbon already sequestered in intact, undamaged vegetation communities with high biocrust cover and large amounts of biomass in trees, shrubs, grasses, and their root systems. If older vegetation communities already sequester more carbon than would be absorbed by new vegetation, the analysis in the FEIS is in error.

Neff et al. (2009) measured soil carbon storage in the soils under pinyon-juniper populations in two sites on GSENM. They found that there were larger C and N stocks under pinyon canopies compared to interspaces. They caution that thinning or rangeland improvement treatments that result in reduced net primary productivity or the removal of woody biomass could result in the loss of stabilized soil carbon and nitrogen.

Biocrusts

Biocrusts are important for soil organic carbon sequestration in drylands (Xu et al. 2022). Havrilla et al. (2020) studied biocrust in pinyon-juniper woodlands on the Colorado Plateau and found that biocrusts were generally larger, less fragmented, and more biodiverse than in sagebrush sites. The authors suggest this may be due to lower use of woodlands by livestock or wildlife relative to sagebrush, which has more forage. This was also seen by Concostrina-Zubiri et al. (2013), who found that areas of higher grazing intensity resulted in impaired biocrust. Biocrust fragmentation can reduce soil stability and increase losses in C and N. (Chaudhary et al. 2009, Barger et al. 2006, Liu et al. 2009).

This research also suggests that pinyon and juniper woodlands with extensive intact biocrust ground cover, such as that seen in Phase III woodlands, may sequester more carbon than areas with disturbed biocrusts.

Fire

The FEIS says that vegetation projects improve landscape resilience to wildfires and would offset some of the climate change impacts from other management actions (FEIS at 2-132). While Page 3-20 prescribed fires and vegetation management would reduce carbon storage in the short term, they would reduce the risk of uncontrolled wildfires that would impact larger areas and result in much greater loss of stored carbon in the long term (DEIS page 3-20). However, the scientific literature around this is uncertain. Some research indicates that even large wildfires release less carbon than supposed (Law et al., 2018; Harmon et al., 2022). This is an important point to clarify before concluding that vegetation management projects reduce carbon emissions in the long run.

Livestock Grazing

In several places the DEIS discusses the benefits of proper grazing techniques and active vegetation management on carbon sequestration and healthy, resilient, biodiverse vegetation. Alternatives including these options would produce more favorable vegetation and carbon sequestration outcomes than those that do not (*see*, e.g., p 2-133; 3-20 to 3-22). The DEIS cites

Chen et al. (2015) to argue that sustainable livestock grazing can have beneficial effects by reducing fuel loads and improving soil conditions and biological diversity. However, the authors specify that sustainable, well-managed grazing depends in part on low (40%) utilization rates (Chen et al. 2015 page 1). The project was conducted in China with sheep, which are more actively managed than cattle. They can be moved more easily once the 40% utilization rate is reached. On GSENM, maximum utilization is 50% and cattle are not monitored frequently. Consequently, GSENM utilization data show that utilization regularly exceeds 50%, which is above the optimum rate for carbon sequestration by grazing. For these reasons, Chen et al.'s conclusion that moderate grazing sequesters carbon is not relevant to GSENM, and any analysis based on that would be in error.

Further, BLM's reliance on Chen et al. 2015 ignores contrary studies concluding that the alleged potential for increase in soil carbon sequestration due to livestock grazing is overblown. As one report put it: "The question is, could grazing ruminants also help sequester carbon in soils, and if so to what extent might this compensate [for the climate emissions of grazing livestock and livestock production]? As the following numbers show, the answer is 'not much'." Food Climate Research Network, Grazed and Confused (2017) at p. 118.

In short, the DEIS analysis of the carbon sequestration potential of vegetation projects and grazing needs more detail and more scientific support. These activities have the potential to significantly impact Monument objects and values, so GSENM needs accurate information to weigh risks and benefits. We suggest working with specialists and researchers in the field for advice on the carbon sequestration of management activities.

Conclusion

We are grateful for the opportunity to provide comments for the Grand Staircase-Escalante National Monument Draft RMP and EIS. We believe that many of our suggestions will assist in moving this EIS forward and bolstering the veracity of BLM's NEPA process. As you may be aware, in September of 2023, the EPA issued new direction on its process for reviewing and commenting on major Federal actions affecting the quality of the human environment.[17] The new direction states "EPA's policy is to review and comment in writing on all DEISs filed with EPA and to make those comments available to the public. Further, EPA policy is to summarize EPA's level of concern and work with the lead agency to resolve significant issues."

In these instances we have proposed elements from other alternatives to adopt, modifications to the existing alternatives, or additional alternative elements to adopt in order to properly

[17] EPA. 2023. Policy and Procedures for the Review of Major Federal Actions with Environmental Impacts. September 26, 2023. Office of Federal Activities, NEPA Compliance Division, Washington, DC 20460. https://www.epa.gov/system/files/documents/2023-09/309-nepa-policy-and-procedures-manual-9-26-23.pdf

protect Monument objects. While the alternatives include proper management of the monument and its objects in many respects, there are some serious improvements needed in order to adequately protect Monument objects. These improvements are outlined in these comments. The problems highlighted, including the failure to adequately protect Monument objects, are deficiencies of analysis that may render the EIS inadequate. In order for BLM to ensure that this EIS is satisfactory, we recommend adopting our proposed revisions. We look forward to the finalization and implementation of the management plan.

Due to the constraints of the BLM's ePlanning portal, we have submitted a full folder of references, appendices, and other relevant information, including GIS shapefiles, that should accompany these comments in FTP via Google Drive. This link will be emailed to the planning team with permission. Please let us know if you have any questions about anything contained in this set of comments or our attachments.

Sincerely,

Mike Popejoy
Utah Public Lands Director
Grand Canyon Trust
mpopejoy@grandcanyontrust.org

Kya Marienfeld
Wildlands Attorney
Southern Utah Wilderness Alliance
kya@suwa.org

Laura Welp
Vegetation Projects Specialist
Western Watersheds Project
laura@westernwatersheds.org

Mary O'Brien
Executive Director
Project Eleven Hundred
maryobrien10@gmail.com

Scott Miller
Senior Regional Director
The Wilderness Society
scott_miller@tws.org

Cory MacNulty
Campaign Director, SW Region
National Parks Conservation Association
cmacnulty@npca.org

Edward B. Zukoski
Senior Attorney
Center for Biological Diversity
tedzukoski@gmail.com

Kara Matsumoto
Public Lands Policy Director
Conservation Lands Foundation
kara@conservationlands.org

Joro Walker
Senior Attorney
Western Resource Advocates
joro.walker@westernresources.org

Michael B. Murray
Chair
Coalition to Protect America's National Parks
editor@protectnps.org

Chris Krupp
Public Lands Attorney
WildEarth Guardians
ckrupp@wildearthguardians.org

Luis Miranda
Acting Director
Utah Chapter of the Sierra Club
luis.miranda@sierraclub.org

Appendix D
Lands With Wilderness Characteristics

During the Monument planning process and with the release of the DEIS, it is apparent that BLM has yet to identify the full extent of the Monument's wilderness resource and perform necessary wilderness characteristics inventories as required by FLPMA and BLM regulations. 43 U.S.C. § 1711(a); BLM Manual 6310.04(C)(1) (Wilderness inventories are to be done on a continuing basis and relevant citizen-submitted data is to be evaluated). This necessary inventory will either re-inventory, amend, or otherwise address existing deficient and flawed Lands with Wilderness Characteristics (LWC) inventories from the 2018/2019 planning process. These specific deficiencies were pointed out during scoping, and new information was provided by the public during this phase of the plan revision. In addition, there remains an extent of BLM lands within the Monument that have neither been inventoried for their potential wilderness characteristics, either in the current plan revision process, in 2018/2019, during BLM's 1999 Utah Wilderness Inventory, or in previous inventories since perhaps the late 1970's. Multiple, and particular inventory units/areas were specifically detailed as still needing to be addressed and inventoried.

The Lands with Wilderness Characteristics Inventory Review (Aug 2023) and GSENM DEIS is completely devoid of any acknowledgement of wilderness characteristics inventory for tens of thousands of qualifying acres. These shortcomings and Manual 6310 compliance issues can be organized into five notable categories:

1. BLM units/areas that are contiguous and not arbitrarily separated by a physical feature from NPS recommended wilderness and BLM designated wilderness (*See below,* Fig. LWC-3, including contiguous non-Monument lands):
    a. Capitol Reef National Park
        i. Lampstand
        ii. Muley Twist Flank
    b. Glen Canyon National Recreation Area
        i. Sooner Bench
    c. Bryce Canyon National Park
        i. Bryce View (Slopes of Bryce)
        ii. Box Canyon
    d. Paria Canyon Wilderness Area
        i. Paria Canyon Wilderness Expansion

2. BLM units/areas that are contiguous and not separated by a physical feature from currently identified LWC and WSAs not inventoried in BLM's 2018 assessments (*See below,* Fig. LWC-4):
    a. Box Canyon (1 location)
    b. Burning Hills (~9 locations)
    c. Fifty Mile Mountain (3 locations)
    d. Mud Spring Canyon (1 location)
    e. North Escalante Canyons (11locations)
    f. Paradise/Wahweap (4 locations)

g. Paria – Hackberry (11 locations)
h. Steep Creek (5 locations)
i. Studhorse Peak (1 location)
j. The Blues (1 location)
k. The Cockscomb (2 locations)
l. Willis Creek (4 locations)

3. BLM units/areas that are contiguous and not separated by a physical feature from currently identified LWC and WSAs inventoried in BLM's 2018 assessments, but with major flawed assessments and determinations in violation of Manual 6310's inventory requirements (*See below,* Fig. LWC-5):
    a. Andalex Not (2 locations)
    b. Lampstand (1 location)
    c. Upper Kanab Creek (4 locations)

4. BLM stand-alone units/areas inventoried in BLM's 2018 assessments, but with major flawed assessments and determinations with Manual 6310's guidance (*See below,* Fig. LWC-6)::
    a. Glass Eye Canyon
    b. Kodachrome Headlands
    c. Ladder Canyon
    d. Nephi Point
    e. Pine Hollow
    f. Rock Cove
    g. Timber Mountain

5. BLM stand-alone units/areas not inventoried in BLM's 2018 assessments (*See below,* Fig. LWC-7)
    a. Coyote Creek

For both categories 3 and 4, many of these 2018/ 2019 inventories applied improper boundaries to disqualify all or part of inventory units– i.e. not along a wilderness inventory road[1] or other substantial human impact, which does not comply with BLM's inventory guidelines under Manual 6310.[2] In several

[1] Manual 6310 states that the boundary delineation for a LWC unit "is generally based on the presence of wilderness inventory roads." BLM Manual 6310 at .06(C)(1). BLM defines a wilderness inventory road as a vehicle route that has "been improved and maintained by mechanical means to ensure relatively regular and continuous use." BLM Manual 6310 at .07. A "way" that is either solely "maintained" by the passage of vehicles, is used regularly but not maintained, or was originally constructed using mechanical means *but is no longer being maintained by mechanical methods* is *not* a road. *Id.*

[2] BLM Manual 6310 states that the "boundary [for a wilderness characteristics inventory unit] is usually based on the presence of wilderness inventory roads" but can also be based on changes in property ownership or developed rights-of-way. Wilderness inventory roads are further defined as those roads that are "improved and maintained by mechanical means to insure relatively regular and continuous use... A route that was established or has been maintained solely by the passage of vehicles would not be considered a road for the purposes for wilderness inventory, even if it is used on a relatively regular and continuous basis." BLM Manual 6310.07. As stated above, Route Analysis forms are required to document that routes used as boundaries meet the criteria for wilderness inventory roads. Where substantially noticeable human impacts do occur within a potential LWC unit, BLM should make an attempt to cut them out of the unit. Manual 6310 directs BLM to define the area to "exclude wilderness inventory roads and other substantially noticeable human-caused impacts," and that "lands located between individual human impacts should not be automatically excluded." BLM Manual 6310.06(C)(3).

others, BLM disqualified an area because it conclusorily determined that one of the unit's identified wilderness characteristics (opportunities for primitive and unconfined recreation, naturalness,[3] or solitude) "does not stand out among other areas." *See, e.g.,* 2018/ 2019 Timber Mountain LWC Inventory at 6-7. This comparative standard is incorrect, and violates Manual 6310, which clearly states that BLM must "not compare the lands in question with other parcels" when assessing potential wilderness characteristics.[4]

Each of the above mentioned units/areas continue to need proper wilderness resource identifications and were all submitted with explanations of deficiencies in our Scoping Comments. Please see SUWA et al. Scoping Comments for more information.

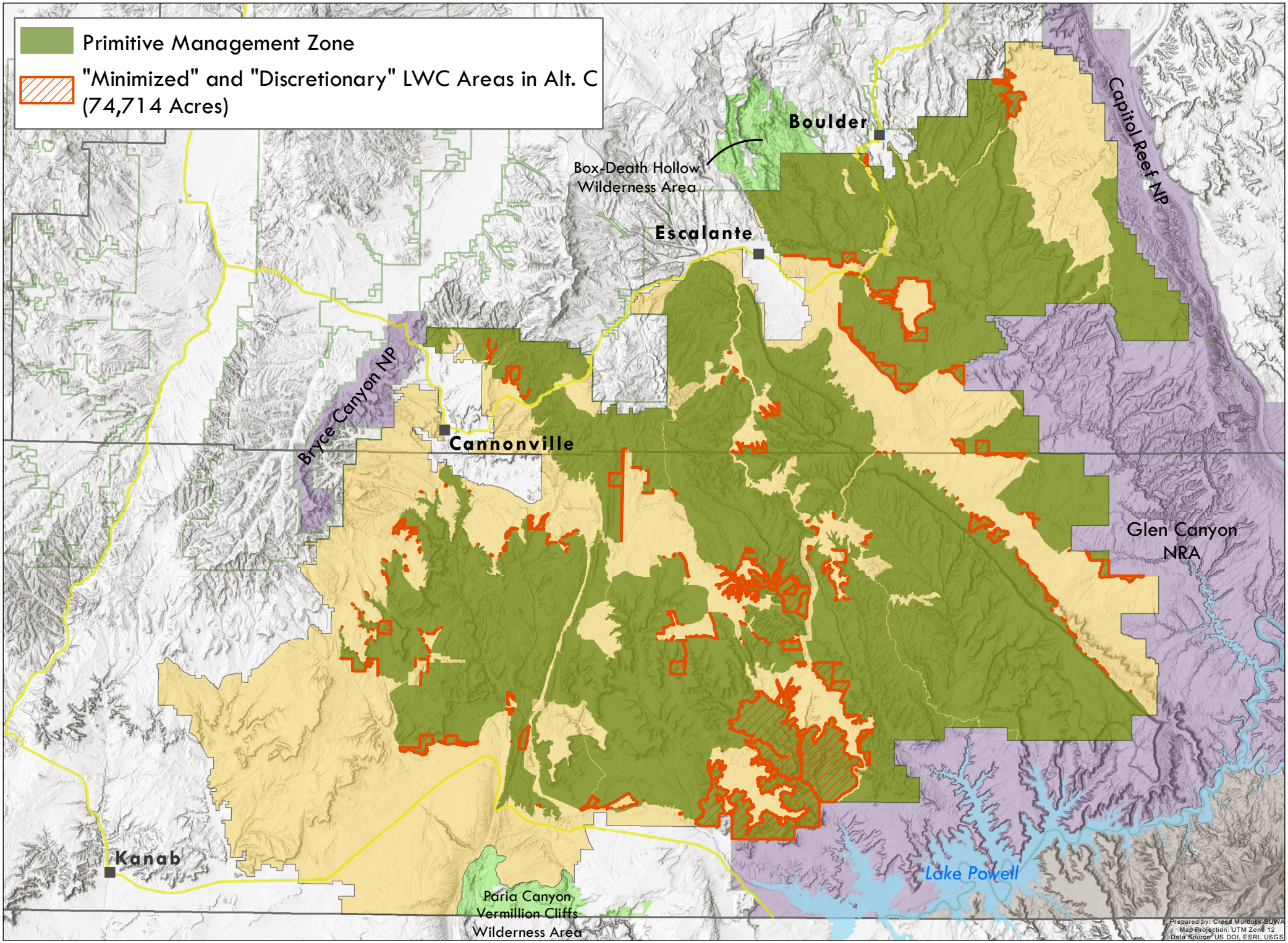
Additionally, during this DEIS comment period, we are re-supplying BLM with GIS shapefiles of each of the described issues and shortcomings and these locations, as well as providing detailed maps below.

[3] BLM Manual 6310 directs, "avoid an overly strict approach to assessing naturalness." BLM Manual 6310.06(C)(2)(b)(ii)(2). BLM is to assess *apparent naturalness*, which the manual distinguishes from natural integrity, meaning that naturalness determinations should be based on whether an area looks natural to the average visitor regardless of ecosystem health. Features listed in Manual 6310 that may be considered "substantially unnoticeable" and thus have no effect on apparent naturalness include trails, spring developments, fencing, stock ponds, and certain types of linear disturbances. Furthermore, the manual specifically states that "undeveloped ROWs and similar undeveloped possessory interests (e.g., mineral leases) are not treated as impacts to wilderness characteristics because these rights may never be developed." BLM Manual 6310.06(C)(3)(d).

[4] The manual provides important detailed information for making determinations as to outstanding opportunities, including that BLM should not compare the lands in question with other parcels. Each area should be evaluated on its own merits, regardless of whether its qualities are perceived to be common or typical of a planning area, or how it compares to other wilderness-quality lands. Furthermore, Manual 6310 plainly states that "an area can have wilderness characteristics even though every acre within the area may not meet all the criteria." BLM Manual 6310 at .06(C)(3)(e). BLM should assess the overall qualities of an area, and not disqualify primarily natural areas based on minimal impacts.

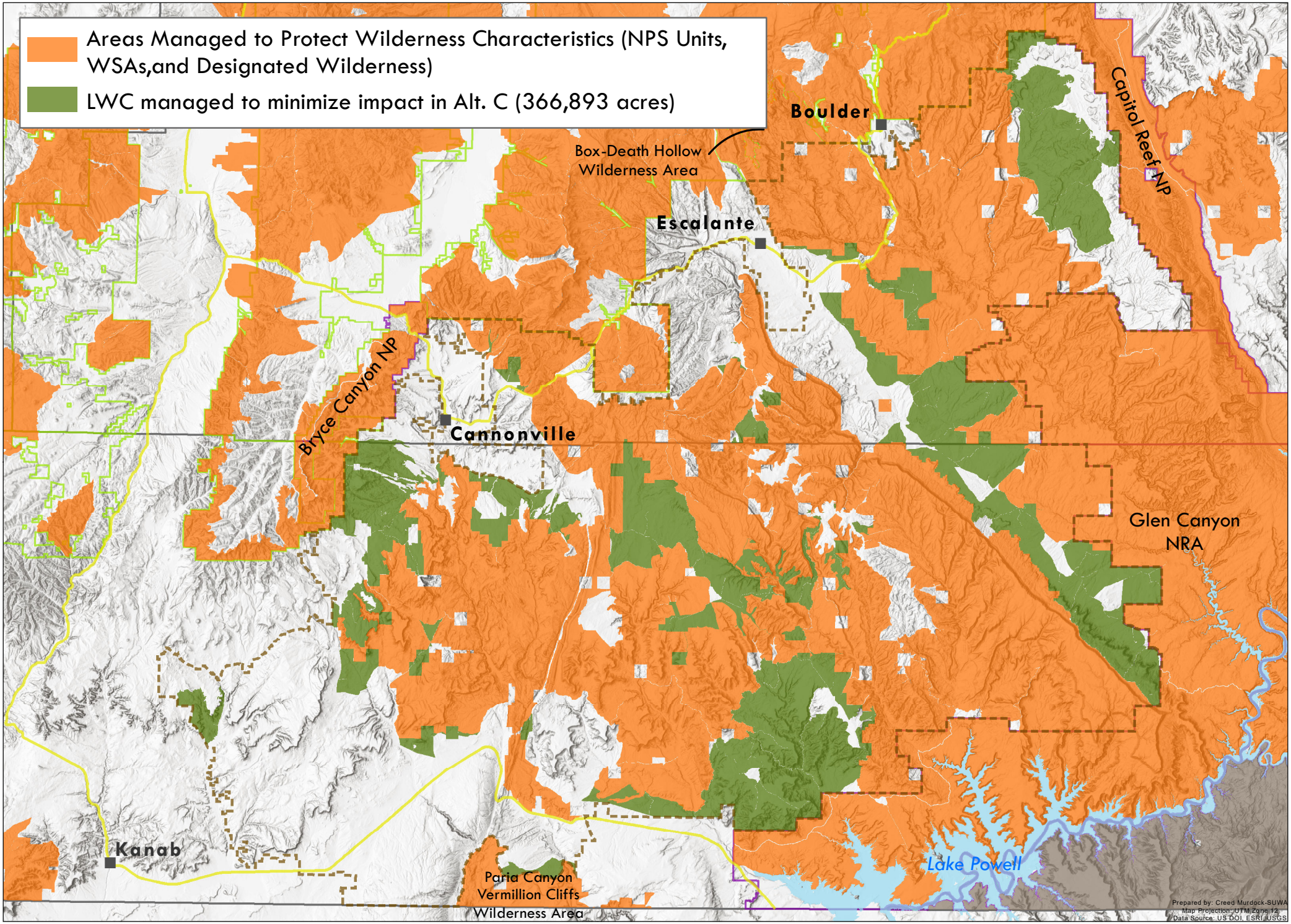
LWC Areas not "Protected" within Primitive Zone Management

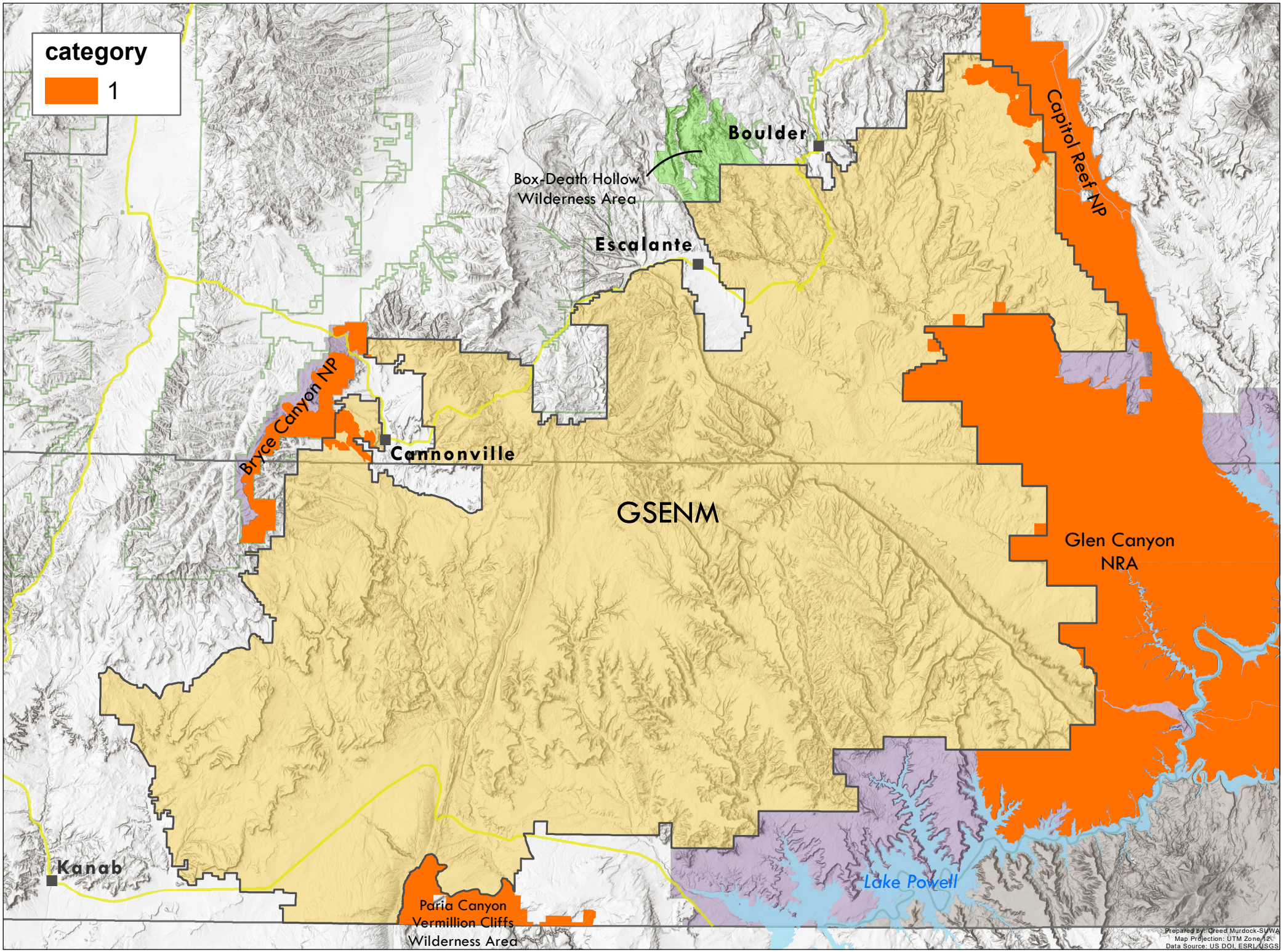
Fig. LWC-1

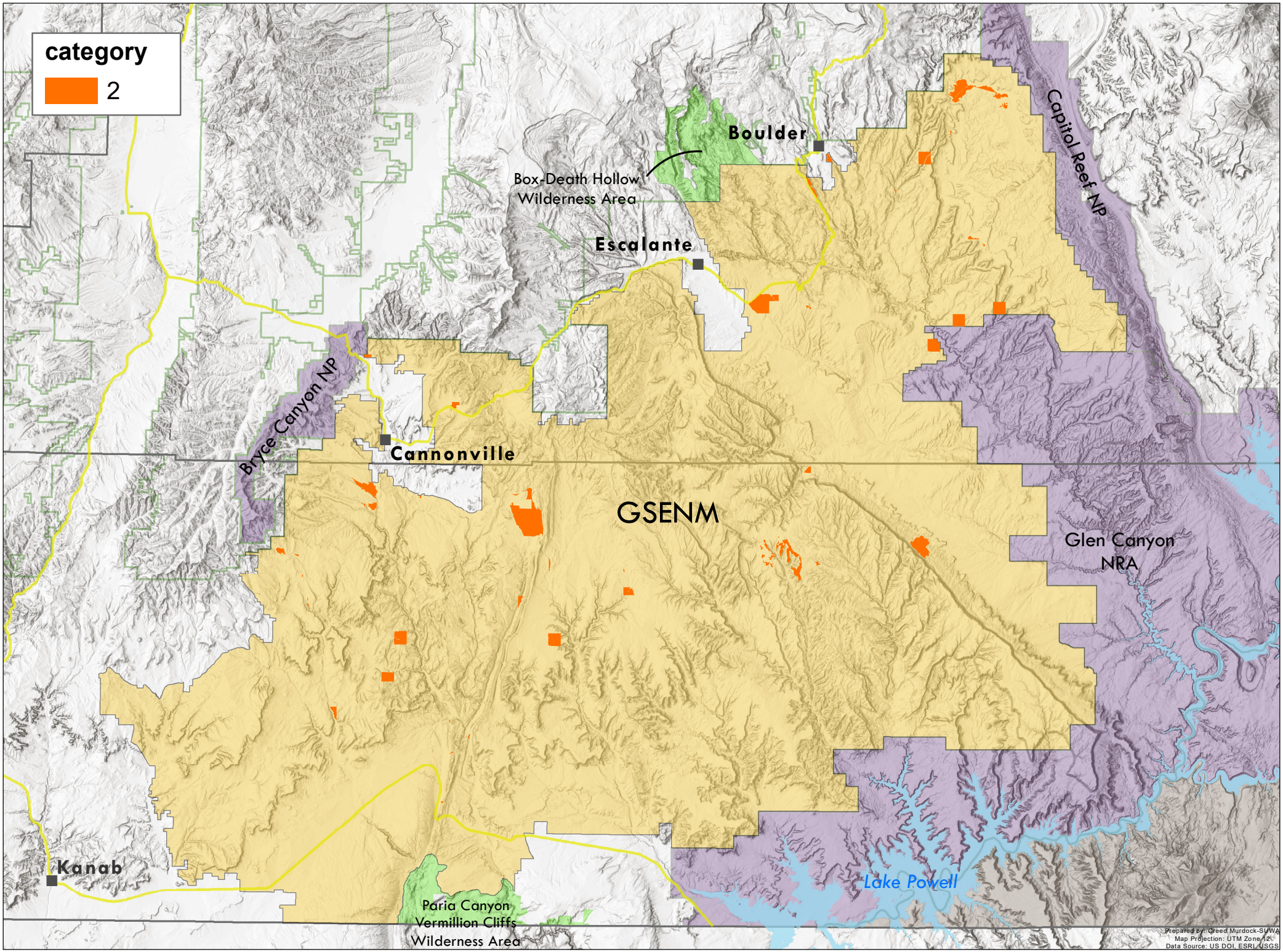


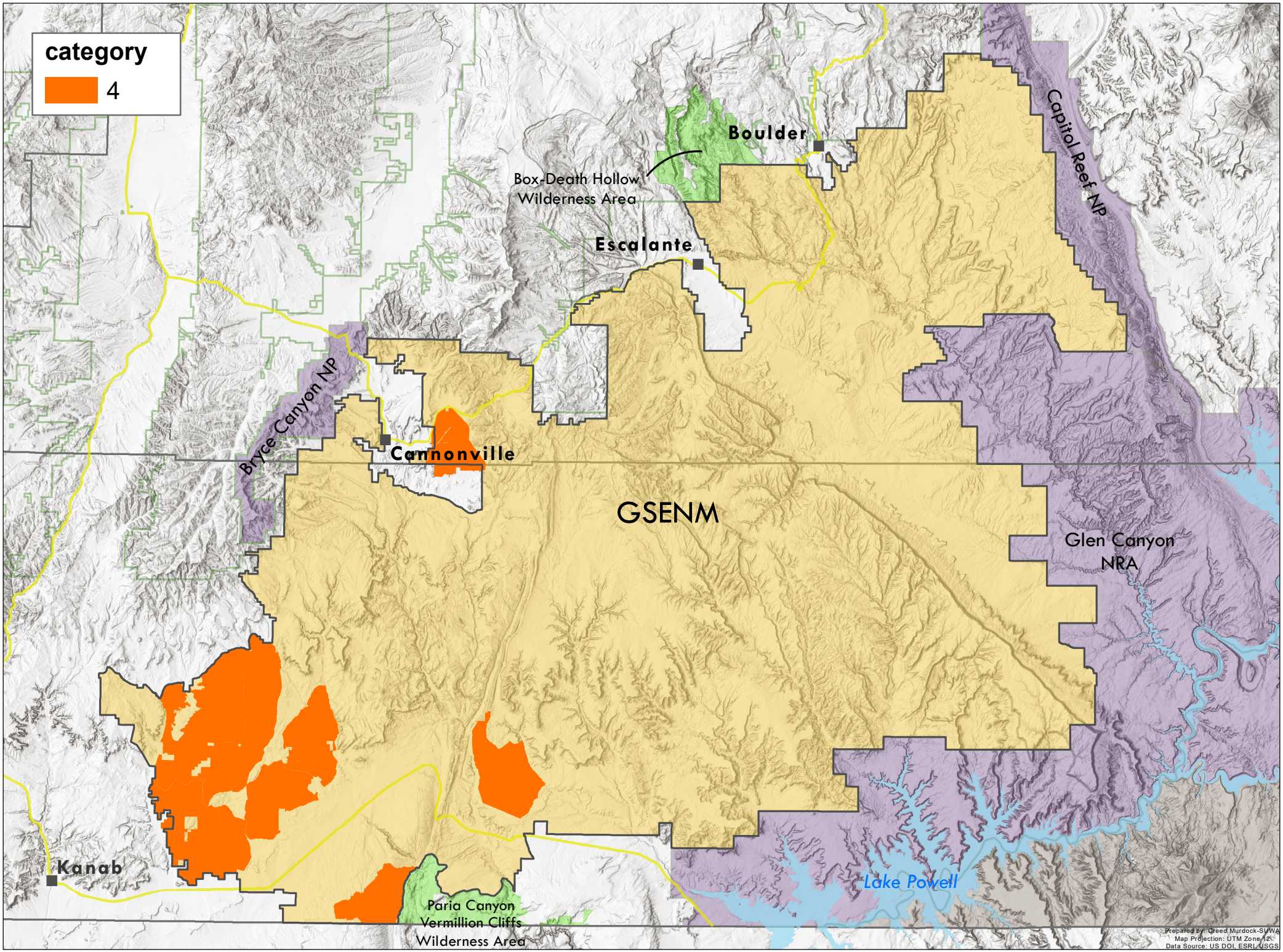
LWC Managed to “Minimize Impact" in Alt. C, yet Contiguous with Lands Managed for Protection of Wilderness Characteristics

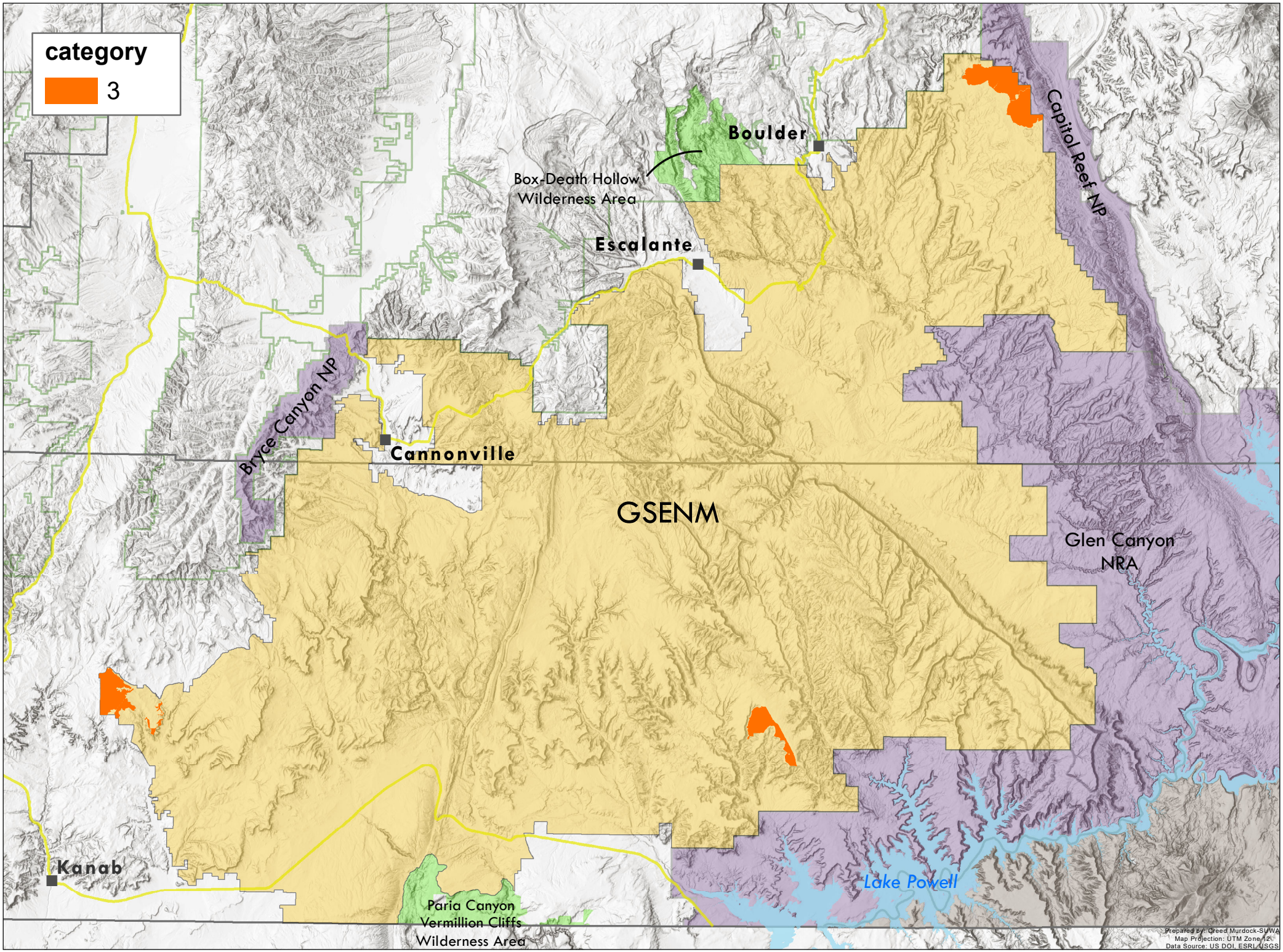
Fig. LWC-2

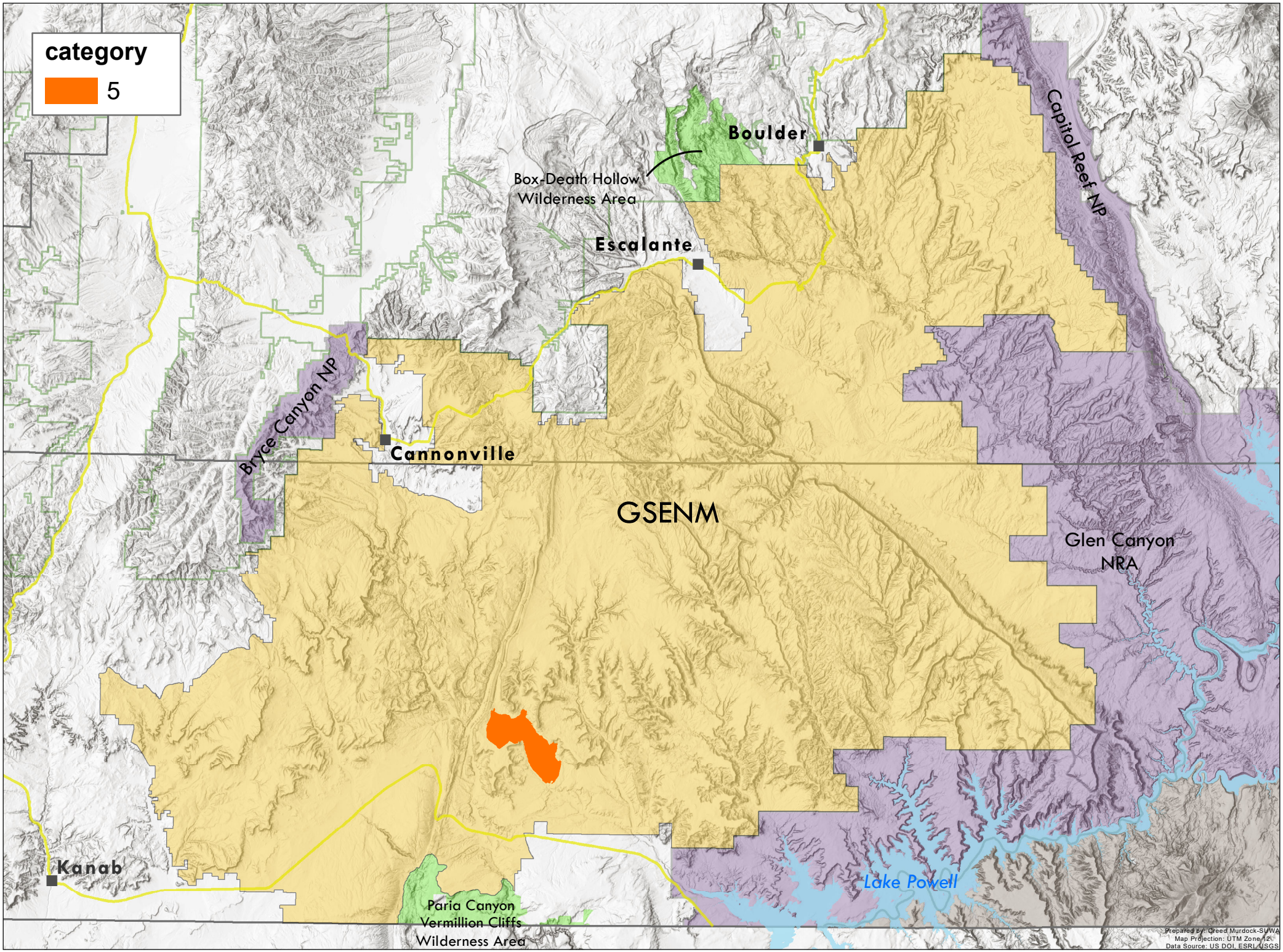



category
1
Boulder
Box-Death Hollow
Wilderness Area
Escalante
Capitol Reef NP
Bryce Canyon NP
Cannonville
GSENM
Glen Canyon
NRA
Kanab
Paria Canyon
Vermillion Cliffs
Wilderness Area
Lake Powell
Prepared by: Creed Murdock-SUWA
Map Projection: UTM Zone 12
Data Source: US DOI, ESRI, USGS


category
2
Boulder
Box-Death Hollow
Wilderness Area
Escalante
Capitol Reef NP
Bryce Canyon NP
Cannonville
GSENM
Glen Canyon
NRA
Kanab
Lake Powell
Paria Canyon
Vermillion Cliffs
Wilderness Area
Prepared by: Creed Murdock-SUWA
Map Projection: UTM Zone 12S
Data Source: US DOI, ESRI, USGS


category
4
Boulder
Box-Death Hollow
Wilderness Area
Escalante
Capitol Reef NP
Bryce Canyon NP
Cannonville
GSENM
Glen Canyon
NRA
Kanab
Lake Powell
Paria Canyon
Vermillion Cliffs
Wilderness Area
Prepared by: Creed Murdock-SUWA
Map Projection: UTM Zone 12S
Data Source: US DOI, ESRI, USGS


category
3
Boulder
Box-Death Hollow
Wilderness Area
Escalante
Capitol Reef NP
Bryce Canyon NP
Cannonville
GSENM
Glen Canyon
NRA
Kanab
Lake Powell
Paria Canyon
Vermillion Cliffs
Wilderness Area
Prepared by: Creed Murdock-SUWA
Map Projection: UTM Zone 12S
Data Source: US DOI, ESRI, USGS


category
5
Boulder
Box-Death Hollow
Wilderness Area
Escalante
Capitol Reef NP
Bryce Canyon NP
Cannonville
GSENM
Glen Canyon
NRA
Kanab
Lake Powell
Paria Canyon
Vermillion Cliffs
Wilderness Area
Prepared by: Creed Murdock-SUWA
Map Projection: UTM Zone 12S
Data Source: US DOI, ESRI, USGS