

SCOPING COMMENTS

INCLUDING THE SUSTAINABLE GRAZING AND RECOVERY ALTERNATIVE for Flodine and Yellow Jacket Allotments and Associated Environmental Assessment for Canyons of the Ancients National Monument, Colorado

Grand Canyon Trust • Great Old Broads for Wilderness
Western Watersheds Project

Table of Contents

A. Introduction	1
B. Grazing in CANM: Applicable Authorities	4
C. NEPA and Alternatives	6
D. The Sustainable Grazing and Recovery Alternative	8
E. Justification For Sustainable Grazing Alternative	12
F. Environmental Assessment Issues	16
G. Conclusion	25
H. References	27

A. Introduction

The following scoping comments are submitted by Grand Canyon Trust, Great Old Broads, and Western Watersheds Project.

Grazing use has not been permitted on Flodine and Yellow Jacket allotments of Canyons of the Ancients National Monument (CANM) since 2005. In 2009, BLM acquired all private land located within both of these allotments.

The Purpose and Need of this Environmental Assessment (EA) has been stated as follows:

*The purpose for this action is to respond to requests from **local** livestock operators and **local** county government agencies for the reauthorization of livestock grazing permits in these allotments. BLM would **address current conditions** and potential Permittee needs in the context of meeting Public Land Health Standards and Guidelines and **other resource management objectives**. The BLM needs to analyze and make a determination for these allotments in accordance with the*

Federal Land Policy Act (FLPMA) and management actions outlined in the Canyons of the Ancients National Monument Resource Management Plan (2010).

A few comments on the above stated purpose and need will provide a context for our expectation that a full range of reasonable alternatives will be analyzed in the EA with on-ground data and best available science, including best available climate change science:

1. While the BLM has stated that the “purpose” for this EA is to “respond to requests from local livestock operators and local county government agencies for the reauthorization of livestock grazing permits in these allotments,” CANM is a **national heritage** and thus the BLM must demonstrate similar responsiveness to requests by all other interested stakeholders in the region and nation.

In other words in a grazing management EA, the western U.S. “custom and culture” of cattle grazing meets the non- or less-consumptive U.S. customs and cultures of national monuments, public lands, conservation, wildlife-watching, water reverence, and cultural resource preservation.

2. These two arid-land allotments inherently produce **minimal vegetation** (with the exception of narrow ribbons of riparian area); are severely depleted of potential native plant (and thus wildlife) diversity; and are massively occupied by invasive, exotic species.

While much of the West’s arid and semi-arid public lands managed by the BLM (e.g., Grand Staircase-Escalante National Monument) are equally depleted of diversity, lacking in vegetative production, and heavily occupied by invasive, exotic species, there must be room in BLM land management analyses, particularly in the face of global warming, to consider whether arid-lands cattle grazing is really in the best interests of the nation, or in fact merely compounds the stresses of global warming that are being observed and are expected to accelerate in coming years and decades in this region.

3. The often incised riparian areas of these allotments are in the process of being invaded by Russian olive, and could become near-monocultures of Russian olive, tamarisk, and other **exotic, invasive species** without active and passive restoration. The BLM EA (2009) that analyzed the 2009 private land acquisition states:

The need is to preserve the cultural and riparian resources in the project vicinity. . .

The McElmo and Yellow Jacket parcels include sections of the only perennial streams in the Canyons of the Ancients National Monument. Purchasing these parcels would provide an

opportunity to reclaim and protect riparian areas. These riparian areas, impacted by poor grazing practices, could be used to research the application and success of reclamation methodologies. Once reclaimed, proper management would ensure the viability of these rare ecological zones and provide habitat for sensitive species.

4. The **cultural resources** that are embedded in the monument's natural resources prompted designation of this monument. Each alternative in the EA, including both the No Grazing Alternative and the Sustainable Grazing and Recovery Alternative will need to be analyzed for their comparative potential for rubbing, trampling, and defecating on and near these cultural resources by cattle; as well as cattle causing or exacerbating erosion, headcuts, and incisions which can expose and destroy cultural resources.
5. After ten years of no permitted grazing, most areas and soil types in these two allotments are showing recovery of **light cyanobacteria**-dominated biological soil crusts ("biocrusts"). Light cyanobacteria-dominated biocrusts provide the basis for potential subsequent recovery of dark cyanobacteria-dominated crusts, and later-successional lichens and mosses. Given the roles biocrusts play in reduction of regional dust production (and thus timing of snowmelt) and water runoff, and retention of water and nutrients, all EA alternatives will need to be analyzed in light of the striking extent of the recent, short-term (i.e., 10 years) soil crust recovery that is obvious throughout the two allotments.
6. There are pockets of land within the allotments that are mostly **inaccessible to cattle**. These pockets, albeit small, provide clear evidence of the degree to which the areas that were being heavily used by livestock prior to 2005 have been depleted. Thus close assessment and analysis in 2016 of these pockets of inaccessibility will be crucial for providing best available science for BLM attempts not only to address "current conditions," as stated in the Purpose and Need, but also for comparing the potential offered by both the No Grazing Alternative and the Sustainable Grazing and Recovery Alternative submitted with these comments.
7. As a monument, CANM is part of our nation's **National Landscape Conservation System** (NLCS) lands, for which BLM management for conservation, protection, and restoration are expected. All EA alternatives must be analyzed for their comparative consequences for conservation, protection, and restoration.

B. Grazing in CANM: Applicable Authorities

The following will be helpful to the BLM as the agency considers its decision space for potential management of the Yellow Jacket and Flodine Allotments:

- 1.1. The Taylor Grazing Act governs grazing activities within the Monument. Under the TGA, a grazing permit is not a constitutionally protected property interest. *U. S. v. Fuller*, 409 U.S. 488 (1973). The BLM may regulate stocking levels, designate foraging locations, establish seasonal timing restraints, and impose related restrictions to protect range resources. The grazing privileges are subject to reasonable regulation to accomplish the Monument's protective purposes. The Proclamation's grazing provision viewed against the broader context of the TGA leads to the understanding that grazing is not a protected right but a privilege that may be regulated within the Monument in order to protect Monument resources.
- 1.2. The Federal Land Policy and Management Act ("FLPMA"), contains several provisions that are relevant to livestock grazing on the Monument. FLPMA's multiple use provision requires the BLM to balance competing resource values to ensure that the public lands are managed in a manner "that will best meet the present and future needs of the American people," 43 U.S.C. § 1702(c). *See, National Wildlife Federation v. BLM*, 140 IBLA 85 (1997) Furthermore, FLPMA contains an exception to the multiple use provision, stating that public lands are to be managed under the principles of multiple use except where "public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law." *Id.* at § 1732. Because the CANM Proclamation was created for the specific purpose of protecting the Monument's resources, the Monument should be managed according to that purpose.

Additionally, FLPMA directs the BLM to manage resources "without permanent impairment of the productivity of the land and the quality of the environment," *id.* at § 1702(c), and "to prevent unnecessary or undue degradation of the lands," *id.* at § 1732(b). FLPMA also mandates that the BLM adhere to its land use plans, "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." *Id.* at §§ 1701(8), 1712. The proclamation, viewed in light of FLPMA's mandates, encourages prioritizing preservation in managing the Monument.

- 1.3. The **Omnibus Public Land Management Act of 2009** (16 U.S.C. § 7202), established the National Landscape Conservation System ("National Conservation Lands") 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(a). The Act requires that the National Conservation Lands be managed "in a manner that protects the values for which the components of the system were designated." *Id.* at § 7202(c)(2).
- 1.4. **Secretarial Order 3308** speaks to the management of the National Conservation Lands. The Order states in pertinent part that "[T]he BLM shall ensure that the components of the [National Conservation Lands] are managed to protect the values for which they were designated, including, where appropriate, prohibiting uses that are in conflict with those values." The 15-Year Strategy for the Conservation Lands reinforces this by stating the "conservation, protection, and restoration of the [National Conservation Lands] values is the highest priority in [National Conservation Lands] planning and management,

consistent with the designating legislation or presidential proclamation.” National Conservation Lands Strategy at 8.

The Order also requires that the National Conservation Lands “be managed as an integral part of the larger landscape, in collaboration with the neighboring landowner and surrounding communities, to maintain biodiversity, and promote ecological connectivity and resilience in the face of climate change.” The Order goes on to require the incorporation of science into the decision-making process for the National Conservation Lands, stating, “[s]cience shall be integrated into management decisions concerning [National Conservation Lands] components in order to enhance land and resource stewardship and promote greater understanding of lands and resources through research and education.”

- 1.5. BLM recently issued manuals to implement policies for the National Conservation Lands. **BLM Manual 6220** addresses management of grazing within National Monuments and states:

- *Where consistent with the designating legislation or proclamation, livestock grazing may occur within Monuments and NCAs.*
- *Grazing management practices will be implemented in a manner that protects Monument and NCA objects and values unless otherwise provided for in law.*
- *The BLM will use Monuments and NCAs as a laboratory for innovative grazing techniques designed to better conserve, protect, and restore NLCS values, where consistent with the designating legislation or proclamation.*

BLM Manual 6220, National Monuments, National Conservation Areas, and Similar Designations (July, 13 2012).

- 1.6. The **National Historic Preservation Act** (“NHPA”), states that “the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people.” 16 U.S.C. § 470. The BLM must “administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations.” *Id.* at § 470-1. NHPA requires the BLM to assume “responsibility for the preservation of historic properties which are owned or controlled by” the agency. *Id.* at § 470h-

The Proclamation recognized the importance of the cultural resources in the Monument, stating that livestock grazing has the potential to impact archaeological and historic resources directly by trampling artifacts, pushing over standing structures, rubbing on rock art panels, and surface disturbance from construction of range facilities. The Proclamation’s grazing provision viewed against the backdrop of the NHPA leads to an interpretation favoring the preservation of cultural resources and limiting impacts to those resources from livestock grazing. *See, Great Old Broads for Wilderness v. Kempthorne*, 452 F. Supp. 2d 71, 87 (D.D.C. 2006) (remanding the Grazing Management Plan for Glen Canyon NRA in part because of the lack of analysis of impacts to cultural resources under the NHPA). In addition, any routes authorized for use for grazing or other purposes must have intensive (Class III) surveys completed pursuant to the NHPA, BLM policy (Instruction Memorandum No. 2012-067). *S. Utah Wilderness Alliance v. Burke*, Case No. 2:12CV257DAK (D. Utah Nov. 4, 2013)

- 1.7. The **Fundamentals of Rangeland Health and Standards and Guidelines**, 43 C.F.R. § 4180.1, also guide grazing management. These regulations established fundamentals of rangeland health and directed each state BLM director to develop state specific grazing standards. Overall, the BLM is required to “promote healthy sustainable rangeland ecosystems,” and ensure these ecosystem components are “properly functioning.” *Id.* at § 4100.0-2. Consequently, the BLM’s own regulations require the agency to balance grazing levels with the need to maintain functioning ecosystems.
- 1.8. **Executive Order No. 3289** establishes direction on climate change and renewable energy development and requires Dept. of Interior agencies to consider emissions in making land management planning decisions for land, water, and fish and wildlife resources.

C. NEPA and Alternatives

The BLM is developing this CANM grazing EA in accordance with National Environmental Policy Act (NEPA) regulations. Section 1507.2(d) of these regulations requires federal agencies to “Study, develop, and describe alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”

Perceived and/or real conflicts are unresolved concerning current livestock grazing management within CANM and protection of the “intertwined natural and cultural resources” described in the CANM Proclamation. Hence the need to study, develop, and describe alternatives for resolving such conflicts. The Sustainable Grazing and Recovery Alternative (Part D. of these scoping comments) is submitted for publication and detailed analysis in the CANM EA for grazing management of Flodine Park and Yellow Jacket Allotments.

The Sustainable Grazing and Recovery Alternative we offer in these scoping comments is reasonable, within the scope of the purpose and need, based in science, and within the jurisdiction of the BLM to implement. In Section D of our scoping comments, we provide a description of benefits that accrue to the Sustainable Grazing and Recovery Alternative.

Nothing in the NEPA regulations prevents detailed analysis or adoption of parts or all of an alternative submitted early in a NEPA process by a non-agency entity. The 2003 EIS for a new Hells Canyon National Recreation Area Comprehensive Management Plan fully considered (and eventually adopted major elements of) a Native Ecosystem Alternative (Alternative N) submitted by the Hells Canyon CMP Task Force, a coalition of non-governmental organizations, individuals, and two Tribes. The EIS also fully analyzed an alternative that had been submitted by the Wallowa County Commission (Alternative W). While the Wallowa-Whitman National Forest did not alter either alternative in any manner, the agency did contact the Task Force to ask for clarification of certain phrases and allowed the Task Force to alter the wording of two elements to render them legal within Forest Service regulations.

Similarly, the 2007 *Final Environmental Impact Statement for the Reissuance of Term Grazing Permits on Eight Cattle Allotments, Beaver Mountain Tushar Range, Beaver Ranger District, Fishlake National Forest; and Millard, Piute, Garfield, Beaver, and Iron Counties* fully analyzed, without altering, an alternative (Sustainable Multiple Use Alternative) submitted by seven non-governmental organizations (Three Forests Coalition). The Fishlake National Forest asked for clarifications of the meaning of certain elements, and allowed the Three Forests Coalition to reword its fire section in standard Forest Service terminology.

In 2012, Judge Marcia Krieger of the U.S. District Court in Colorado set aside a resource management plan for oil and gas development in the Roan Plateau that had been approved by BLM in 2007. Her Opinion was based on failure of the BLM to consider an alternative that had been submitted in a 2005 letter by the non-governmental group, Rock the Earth. Judge Krieger wrote in her Opinion in *Colorado Environmental Coalition, et al v. Salazar*:

Contrary to the BLM's position at oral argument that the Community Alternative was a 'moving target' that was 'not clearly defined' so as to permit meaningful analysis, the Court finds that the April 8, 2005 letter from Rock the Earth sets forth the general contours of the (or at least 'a') Community Alternative in sufficient detail so as to permit meaningful analysis of that alternative by the BLM. The Court further finds that the Community Alternative, at least as described in Rock the Earth's letter, was indeed a distinct and concrete 'alternative' to the other courses of action being contemplated by the BLM.

This (and other court rulings) indicates that the BLM is able to analyze in detail and present to the public the Sustainable Grazing and Recovery Alternative.

A 1972 case, *Calvert Cliffs Coordinating Committee, Inc. v. Atomic Energy Commission*, 404 U.S. 942 (1972) was a non-governmental organization's challenge to AEC's NEPA procedures. In its ruling for *Calvert Cliffs Coordinating Committee*, the Court noted:

NEPA requires that [all Federal agencies] must – to the fullest extent possible under its other statutory obligations – consider alternatives to its actions which would reduce environmental damage.

We believe the Sustainable Grazing and Recovery Alternative, while allowing for livestock grazing in Flodine Park and portions of Yellow Jacket Allotments, would reduce environmental damage associated with current grazing management.

Moreover, we expect that the Sustainable Grazing and Recovery Alternative will be, to quote Judge Krieger, a “distinct and concrete ‘alternative’ to the other courses of action being contemplated by the BLM.”

As yet, we are unable to place the Sustainable Grazing and Recovery Alternative in the precise format the BLM will use to present other alternatives because we have only the scoping notice with its purpose and need and general issues to be addressed. However, we have numbered the various elements of the Sustainable Grazing and Recovery Alternative in such a manner that the elements could be moved around into a format allowing for comparative analysis with BLM Alternatives once we see the format BLM is using.

Just as the BLM will develop alternatives the agency believes are integrated and comprehensive, so we have done. We therefore explicitly request that the Sustainable Grazing and Recovery Alternative be presented unaltered to the public alongside BLM and any other alternatives, including the No Grazing Alternative. Placing other elements into the Sustainable Grazing and Recovery Alternative, deleting particular elements, or rewording certain elements without our permission could compromise the integrity, reasonableness, feasibility, scientific basis, environmental consequences, and/or social acceptability of the Sustainable Grazing Alternative.

That said, if BLM finds particular phrases or elements in the Sustainable Grazing Alternative unclear or, for reasons currently unknown to us, not legally possible, we request that BLM notify us and give us the opportunity to clarify the wording, or alter an element so as to bring it into legal possibility.

D. SUSTAINABLE GRAZING AND RECOVERY ALTERNATIVE

The following is an alternative to be considered “as is” in the EA. Just as the BLM hopefully develops a reasonable, internally consistent alternative or alternatives, the Sustainable Grazing and Recovery Alternative is reasonable and internally consistent, and will likely be different than that proposed initially by the BLM.

1. YELLOW JACKET ALLOTMENT

1.1. **Yellow Jacket Allotment** will be established as a reference area for comparable soil and vegetation types throughout CANM.

1.1.1. Up to 25% of the allotment acreage will be available for collaborative experiments, including innovative grazing techniques, with quantitative hypotheses to be tested.

1.1.1.1. Collaborations will use consensus decision making and invite conservation NGO membership.

1.1.2. Following assessment of the functionality of former stock ponds for wildlife, including non-game wildlife, obliterate and re-contour those not providing significant benefits for wildlife.

2. FLODINE PARK ALLOTMENT

2.1. **Flodine Park Allotment** will be available for cattle grazing.

2.1.1. Utilization.

2.1.1.1. A 30% utilization standard, both for riparian and upland areas, will be instituted within Flodine Allotment.

2.1.1.2. Utilization will be measured only on key native, palatable plant species.

2.1.2. Enclosures

2.1.2.1. A permanent enclosure at least 50' X 50' will be established in every pasture on a site representing the pasture's dominant soil/vegetation type except for at least a 100' X 100' enclosure in Desert Sand Ecological Site Description soils, which are not represented in the reference area, Yellow Jacket Allotment.

2.1.2.2. McElmo Creek will be fenced, either for no livestock grazing, or as a riparian pasture with quantitative desired conditions and triggers for consideration of revision of the riparian pasture grazing plan at least every 5 years.

2.1.2.3. Enclosures with gated openings accessible to livestock will be locked, with CANM providing a key to the permittee; and retaining another key for as-

needed use by public members who wish to access the site for non-grazing purposes.

2.1.3. Biological soil crust protection.

- 2.1.3.1. Graze only when ground is frozen in locations where biological crust (light and/or dark cyanobacteria, moss, and/or lichen) is capable of being supported.

2.1.4. Cultural resources protection

- 2.1.4.1. All architecture (e.g., standing masonry walls) and rock shelters will be fenced from cattle access prior to reintroduction of cattle.
- 2.1.4.2. If field evidence is provided showing cattle-related damage to cultural resources, timely management changes will be made to prevent further damage.

2.1.5. Annual Use Plans. Each annual use plan for Flodine Park Allotment will reflect the best estimate that the number of days authorized and other instructions will result in Objectives being met or moved toward.

- 2.1.5.1. Pasture movement within annual permits. Gathering of livestock will commence prior to the end date of the use of a pasture or area such that all livestock will have been moved and stragglers found by the off date.
- 2.1.5.2. A deferred/rest rotational grazing management system will be used to move livestock through pastures until scheduled use dates are met or until forage utilization thresholds ("triggers", e.g., 30% or 25% utilization) are met. When use dates or triggers are met, livestock will be moved to other ungrazed pasture(s) or completely removed from the allotments.
- 2.1.5.3. Annual authorized livestock numbers, stocking rates, and scheduled rotations will be identified through annual operating instructions, with explicit consideration of the previous season's monitoring; actual use; production of palatable, native vegetation; availability of livestock water; and current climatic and resource conditions.

2.1.6. Revegetation (including maintenance) of sites formerly seeded to exotic species, will utilize native species only.

2.1.7. Water trough/ watering pond non-native, invasive plant species. The permittee(s) will manually maintain an area within 100 feet of a watering trough or pond free of all invasive, exotic plant species.

2.1.8. Gates.

- 2.1.8.1. All gates through which the public may pass will be easily operable by members of the general public.
- 2.1.8.2. A sign on any gate through which the public passes will indicate the current dates of livestock in the unit (e.g., unit/pasture, riparian pasture) on either side of the fence and direction to keep the gate closed during those times the livestock should be in one of the two adjacent units.

2.1.9. Fire. Grazing will be suspended from post-fire areas for at least two years or until the majority of native plant species in the area have seeded, whichever is longer.

2.1.10. Roads for Livestock Management. Maintain roads and trails essential for facilitating livestock grazing in a manner that minimizes the effects on landscape hydrology (avoid concentrating overland flow, prevent sediment transport, and minimize compaction to maintain infiltration capacity).

2.1.11. Reduced Use or Non-use. A permittee request for multi-year non-use or partial use will be granted for conservation or recovery outcomes that can be objectively documented and measured. An approved monitoring plan and schedule will be part of the application.

- 2.1.12. **Utilization Cages.** For purposes of quantitatively measuring utilization, utilization cages must have been in place for two years (rather than one) in order to more accurately depict expected production.
- 2.1.13. **80%.** Grazed conditions will be considered to be appropriate when monitoring documents that conditions are at least 80% (e.g., of soil cover, native plant species richness, light cyanobacterial crust) of those in enclosures of the same ecological site (e.g., soil type, precipitation, elevation, slope, as relevant). Such reference areas may consist of enclosures, or comparable areas in the ungrazed Yellow Jacket Allotment. Agency or other objective documentation of conditions below 80% of the reference site(s) are appropriate subjects for problem-solving among the BLM, permittees and interested publics.
- 2.1.14. **Independent Monitoring.** Upon objective documentation of on-ground indications of resource problems, any member of the public can arrange for a meeting with CANM staff to discuss and propose solutions to the problem(s).
 - 2.1.14.1. A written record of evidence of the problem(s), solutions considered, and commitments by CANM, interested public, and/or permittees will be retained in the file(s) of the relevant allotment(s).
 - 2.1.14.2. Objective, repeatable data gathered are required in problem-solving meetings. All such meetings are open to, and invitations extended to, the permittees and other interested publics.
- 2.1.15. **Global warming/climate change.** Through adaptive management strategies, respond to climatic variability (e.g., drought) and change by utilizing a variety of tactics, including flexible stocking rates and grazing strategies to conserve natural resources.

3. COMMON TO FLODINE AND YELLOW JACKET ALLOTMENTS

- 3.1. **Passive and Active Vegetation Treatments.** Vegetation treatments will:
 - 3.1.1. Have the objective of restoring or supporting potential native vegetation and ecosystem processes;
 - 3.1.2. Address underlying causes of the problematic conditions prompting vegetation treatments;
 - 3.1.3. When livestock and/or wild ungulate grazing have contributed to the problematic conditions being treated, grazing will be managed to avoid return of the problematic conditions.
 - 3.1.4. Utilize native seeds or seedlings only, of local genetic stock whenever possible;
 - 3.1.5. Include measurable Desired Outcomes and the methods that will be used to monitor outcomes when compared to outcomes in a portion of the treated area that is not grazed.
 - 3.1.6. Be detailed in project-level plans and NEPA analyses, which provide for public comment on a full range of reasonable alternatives.
 - 3.1.7. Use a variety of measures to protect planted and naturally regenerated seedlings from the effects of trampling, browsing, and girdling by livestock and wildlife. Such measures will typically include temporary suspension of grazing, and may include fencing, tubing, netting, and/or animal repellants; and
 - 3.1.8. Mimic natural processes to the degree possible, including, but not limited to succession and use of prescribed fire.
 - 3.1.9. A budget for monitoring to determine vegetation treatment outcomes will be part of each project.

3.2. Non-native and/or Invasive Plant Species

- 3.2.1. Passive restoration and non-chemical methods will be the first priority for preventing the introduction, establishment and spread of exotic, invasive plant species.
- 3.2.2. If herbicides are deemed essential, least use of herbicides will be accomplished using Integrated Vegetation Management principles, including reducing or eliminating stressors contributing to the introduction, establishment and/or spread of exotic, invasive plant species.
- 3.2.3. Actively seek partnerships for removal of Russian olive or other invasive species.

3.3. Cattle ponds

- 3.3.1. Engineer spillways from active and abandoned stock ponds to prevent failure and resource damage.
- 3.3.2. Re-contour abandoned stock ponds where surrounding natural resources will benefit.

E. JUSTIFICATION FOR SUSTAINABLE GRAZING ALTERNATIVE

1. Fourteen Benefits of Yellow Jacket closure to cattle

1.1. No current permittee is displaced

No permittee currently is authorized to graze cattle in Yellow Jacket. CANM staff has indicated they would like to allow the adjacent permittee to gain access to Yellow Jacket to allow for rotation of pastures. This problem can be addressed with shorter grazing season or creation of more pastures with fewer cattle on that allotment

1.2. Abides by CANM RMP commitment to protect biological soil crusts, which are nearly ubiquitous, at least in early-seral condition (i.e., light cyanobacterial crusts) throughout CANM.

The Livestock Section of the CANM RMP, Chapter 2, p. 85, states:

Implement protective measures where biological crust communities are identified, such as winter grazing only (December and January) when soil is frozen.

The Purpose and Need pledges:

...accordance with . . . management actions outlined in the Canyons of the Ancients National Monument Resource Management Plan (2010).

1.3. Insures that archeological objects and structures will not be trampled or impacted (directly or indirectly) by cattle grazing and that new fencing to protect archaeological resources from cattle will not be required (though fencing may be required for protection from human visitation).

1.4. Provides the first large reference area relevant to other grazed areas in the Monument

1.4.1. No new fencing will be required to gain the first large reference area in the Monument.

- BLM staff indicated on the 10/30/2015 field tour that allotments currently not grazed in CANM (East and West Sand Canyon, Rock Creek, Goodman Gulch and Trail Canyon) are not representative of most other allotments.

1.5. Provides for a minimal degree of “balance” between grazed and ungrazed lands within the Monument.

1.6. Allows for maximum potential protection for special status species (see F 6.8 and F 6.9 below).

1.7. Avoids grazing in marginal, low-production areas.

- Yellow Jacket Ecological Site Descriptions are all indicative of the low end of production of palatable forage: Alkali Bottom, Alkali Flat, Clayey Salt Desert, Salt Desert Breaks, Shallow Desert.

1.8. Allows for learning the degree to which an allotment's severely depleted species diversity (e.g., Yellow Jacket Allotment) can recover over time

- In a classic, 45-year study of plant species in 79 permanent plots (mostly not grazed by livestock), species richness increased throughout the 45 years (Anderson and Inouye 2001). The value of having Yellow Jacket as an allotment free of livestock grazing for decades will provide important information about recovery of currently-depleted habitats.
- Now-retired University of Utah biology professor Dennis Bramble has observed recovery in 160 acres west of Escalante following fencing that excludes most cattle grazing. Observed grass species have increased from nine to 49 with no active intervention over 25 years. (Bramble 2015).

1.9. Allows for development of mid- and later seral biological crust (pinnacled dark cyanobacterial crust, lichen, moss) in the absence of cattle trampling.

- Early seral crusts (light cyanobacterial crusts) have been developing in Yellow Jacket and Flodine Park during 11 years (2005-2015) of no authorized cattle grazing. These are the foundation on which dark cyano, moss, and lichen can develop (O'Brien 2015).

1.10. Allows a test in Flodine Park of the 2005 EA claim that improved grazing will "...result in ...increased litter and biological crust cover and reduce the amount of bare ground (2005 grazing renewal FONSI).

Similarly, the 2005 EA claimed that potential impacts to soil biological crusts from livestock grazing under both the Deferred Grazing During Critical Period and the Grazing During Dormant Season would result in biological soil cover increasing in size and complexity (2015 Notice of Proposed Decision.

We do not believe that biological soil cover will increase in size and complexity with cattle grazing, though increased litter might occur with 30% utilization as proposed for Flodine Park in the Sustainable Grazing and Recovery Alternative.

The lack of cattle grazing in Yellow Jacket Allotment where biocrusts development and complexity proceeds without cattle trampling, will allow for a

comparison with the proposed grazing in Flodine Park, along with a comparison of litter increase and bare ground decrease.

- 1.11. Allows recovery of riparian and upland vegetation.** With no cattle grazing, conditions could be prioritized for restoration despite upstream contribution to non-functional status.
- The Yellow Jacket allotment showed a moderate degree of departure from reference condition in 2001 rangeland health assessments and the portion of Yellow Jacket Canyon within the allotment was rated Nonfunctional with livestock grazing one of the casual factors. (BLM 2005, citing a 2003 Ground Survey Lotic PFC rating of the creek.)
 - A 2003 rangeland health survey assessment (2005 grazing renewal FONSI) showed that Yellow Jacket was not meeting any of the five rangeland health standards apart from water quality. Grazing management was a factor in the failure to meet rangeland health standards and in the stable to downward trend the allotment is evidencing.
 - The Conservation Fund-Wallace Acquisition EA (2009) showed no improvement in the condition of the riparian areas. Fifty-two percent of the allotment was rated in fair to poor condition (BLM 2005). Cool season grasses were gone, and other native species were declining while cheatgrass increases. (BLM 2005)
- 1.12. Makes available up to 25% of Yellow Jacket allotment in which collaborative restoration experiments can be undertaken,** including innovative grazing experiments
- This would encourage partnerships, e.g., for restoration of key elements of Yellow Jacket Creek *(e.g., Colorado Pikeminnow); or potential reintroduction of beaver.
 - This could also encourage the interest of applicants for the Flodine Park Allotment and Yellow Jacket Allotment permits who are interested not only in potentially more ecologically sustainable grazing in Flodine Park, but also in cooperating with NGOs in experimentation in Yellow Jacket allotment.
- 1.13. Allows for separation of impacts otherwise not separable from grazing:**
- 1.13.1. Impacts of global warming (and associated climate change impacts) from grazing impacts
 - 1.13.2. Drought impacts separate from grazing impacts
 - 1.13.3. “Historic” (past) livestock use from current livestock use
 - 1.13.4. Cattle impacts separate from trespass horse impacts

- 1.14. Provides the public with a rare, ungrazed area** in which to hike and camp without ubiquitous cattle sign (feces, trampling, grazed vegetation, bitten-off flowering heads) and associated infrastructure such as fences, salt blocks, and water tanks.

2. **Benefits of Flodine Park Alternative**

- 2.1. Allows for BLM to attempt improvement of the allotment** to meet Rangeland Health Standards with improved grazing. The 30% utilization standard will allow the allotment to recover some degree of potential native diversity (Holechek, et al. 1999, a review of 25 grazing studies: “*Heavy stocking* [i.e., 57%] *consistently caused a downward trend in ecological condition, light stocking* [i.e., 32%] *caused an upward trend, and slight improvement occurred under moderate stocking* [i.e., 43%].)
- The 2005 EA (BLM 2005) noted that 60% of Flodine Park acres had “Moderate to Extreme” or “Extreme” departure from reference conditions for biotic integrity, and another 36% had Moderate” departure.
 - In 2002 the portion of McElmo Creek within the Flodine Park allotment was rated Functioning at Risk in part due to grazing management (BLM 2005)
 - Four long-term trend vegetation transects in Flodine Park indicated a downward trend, with cool and warm season grasses and saltbrush shrubs decreasing, except for warm season grasses “stable” on one transect (BLM 2005).
 - A 2003 rangeland health survey showed that Flodine Park did not meet four of the five rangeland health standards (upland soils; riparian systems; healthy, productive animal and plant communities; and special status, threatened, and endangered species) due to livestock grazing, and met only the standard for water quality (BLM 2005).
- 2.2. Encourages progressive, ecologically-oriented ranchers** to apply for the permit, as it is not “BLM as usual.”
- 2.3. Abides by the LRMP commitment to protect biological soil crusts**, which are nearly ubiquitous, at least in early-seral condition (i.e., light cyanobacterial crusts) throughout CANM.

The Livestock Section of the CANM RMP, Chapter 2, p. 85, states:

Implement protective measures where biological crust communities are identified, such as winter grazing only (December and January) when soil is frozen.

F. ENVIRONMENTAL ASSESSMENT ISSUES

1. Retirement Decision Space.

The BLM has the decision space to retire Yellow Jacket Allotment from livestock grazing. The CANM RMP (BLM 2010) includes the following Livestock Grazing, Management Actions: Allowable Uses and Actions:

Make one of the following determinations in the event a grazing permit is relinquished or cancelled:

- 1) *Reissue a term grazing permit.*
- 2) *Close, either temporarily or permanently, the allotment to grazing where any of the following exists and is attributable to livestock grazing:*
 - *damage to cultural resources;*
 - *fragile soil/biological crusts essential for soil and water resource protection;*
 - *low forage production (less than 200 pounds/acre);*
 - *inadequate facilities to manage livestock grazing (such as fencing, water, or forage availability); and/or*
 - *degraded riparian and/or upland conditions.*
- 3) *Create temporarily or permanently, a reserve forage allotment ...*

All of the impacts and degraded conditions listed in option #2 above occur in Yellow Jacket and Flodine Park allotments.

2. Purpose and Need

The purpose and need as stated in the October 21, 2015 scoping notice appears to predetermine the decision to “address potential Permittee needs” for reauthorization of livestock grazing in the vacant Flodine Park and Yellow Jacket Allotments.

Because this is a National Monument, BLM must look to the Monument Proclamation, Monument Management Plan and the NLCS Act to determine an appropriate purpose and need. These laws do not mandate continuation of grazing. Rather, they mandate that BLM manage the Monument to protect its natural and cultural resources.

Thus, the purpose and need here must be to determine how to manage these two areas such that they comply with protection of Monument resources, which may or may not include grazing. A purpose and need any narrower would be unreasonable given the underlying statutory context, and would thus lead to an unlawful foreordained outcome.

3. Economics

When/if the EA mentions economics in any form, it will need to provide a full accounting of costs and benefits accrued to economics.

It will be important to distinguish between private costs and benefits and public costs and benefits. That is, who is paying for what aspects of grazing management, e.g., fencing, piping, water troughs, monitoring, cultural resource monitoring, permit administration? Who is receiving money from grazing on the Monument? What are public benefits? What are public costs?

In 2006, when the Fishlake National Forest used a narrow input-output method for comparing alternatives for grazing management on eight cattle allotments on the Fishlake NF, the EIS was appealed on economic analysis grounds. An Appeal Resolution regarding the inadequacy of the EIS economics analysis resulted in the Trust working a year with the USFS Washington Office Economist to agree jointly on guidelines (Trust 2008) for comparing grazing alternatives within an EIS. These guidelines include consideration of natural resources costs/benefits and unquantified economic costs.

The BLM IM 2013-131, "Guidance on Estimating Nonmarket Values" provides some direction for including nonmarket values in the economics analysis.

4. Cultural Resources

The following considerations and earlier BLM analyses will need to be addressed in the comparative analysis of the expected impacts for each of the EA alternatives:

- 4.1. CANM was established by Presidential Proclamation to protect the highest known density of archaeological sites in the nation with evidence of cultures and traditions spanning thousands of years. The more than 5,000 recorded sites include archaeological and historic objects such as cliff dwellings, villages, great kivas, shrines, sacred springs, agricultural fields, check dams, reservoirs, rock art sites and sweat lodges. Thousands more await documentation and study. (CANM Proclamation, 2000)
- 4.2. The Wallace property acquisitions fall within both Flodine Park and Yellow Jacket allotments, and "under management of the BLM, the cultural resources located on the private properties would receive increased management and protection under Federal historic preservation laws. The inclusion of these cultural resources in the Monument would ensure long-term preservation of additional components of the prehistoric landscape of this region." (BLM 2009)
- 4.3. The Wallace parcels contain at least 25 documented sites with more than 700 predicted. These sites include habitation sites containing room-blocks, kivas, and associated midden and sheet trash deposits; towers; granaries; petroglyphs; and artifact scatters representing locations of tool manufacture and other resource procurement and processing activities. An extremely unique prehistoric

solstice maker has been reported. A historic structure with standing walls has also been documented. (BLM 2009)

- 4.4. Wallace Acquisition Parcel 2 includes Jackson's Castle, an archaeologically and historically important site that figured prominently in BLM's justification for the land acquisition. It was first recorded and photographed by William Henry Jackson and the Hayden Survey in the mid-1870s. After the Wallace acquisition, 100% cultural resource inventory was conducted on Parcel 2 (Yellow Jacket Allotment, 32 sites recorded). The Wallace Acquisition EA stated the "The need is to preserve the cultural and riparian resources in the project vicinity" (BLM 2009).
- 4.5. Both open and sheltered sites are represented within these allotments, and include a wide variety of types, such as small seasonal habitations and lithic quarries, etc. to prehistoric community centers comprised of complex, large habitation sites having numerous architectural and non-architectural features, oftentimes exhibiting multiple occupations. Historic structures and paleontological resources have also been identified in this area (BLM 2014).
- 4.6. Certain site types are considered more sensitive or vulnerable to impacts from livestock, such as sites with standing architecture, rock art, and rock shelters. Damage to architecture, such as standing masonry walls, includes collapse or rubble displacement that leads to collapse. Natural rock shelters can be attractive places for animals seeking shelter from sun or weather. In addition to increased erosion from trailing up slopes to reach rock shelters, the fragile site deposits are at risk from trampling, mixing, and chemical alteration/deterioration from concentrations of urine and dung. Preservation of perishable archaeological remains is often exceptional in natural rock shelters because of dry conditions, so this rare class of artifacts is particularly vulnerable to damage or destruction from livestock. Abrasion by animals has the potential to deteriorate or destroy rock art. Sites with exposed human remains and water control or agricultural features are extremely sensitive, fragile, and rare. Consequently, sites with these features are particularly vulnerable to livestock impacts (BLM 2014).
- 4.7. There are studies showing the matrix of archaeological sites is adversely affected by a number of direct effects of livestock, including chiseling in damp soils and sloughing and collapsing of streambanks. It is also affected by indirect effects of livestock including removal or partial removal of vegetation and trampling induced compaction that can reduce infiltration and increase runoff that can lead to erosion, streambank destabilization, and downhill transport of artifacts. Diachronic monitoring conducted by BLM archaeologists has identified close links between reduction of vegetation through grazing and the incidence of vandalism and artifact collection. Other studies show cattle induced impacts such as damage to artifacts on the surface through flaking, edge damage or

breakage and both vertical and horizontal displacement of artifacts. Cattle damage artifacts and disturb artifact provenience. At rockshelter sites livestock deposit cow dung, churn site deposits and destroy architectural features (Horne and McFarland 1993).

- 4.8. Archaeologists and others have long known that cattle grazing causes impacts to archaeological sites and that those impacts are not limited to developments or areas of cattle concentration (Horne and McFarland 1993).
- 4.9. Land health conditions, especially as they relate to the impact of grazing upon the ground surface, could be a factor in site discovery and site condition. Though impacts have occurred to cultural resources from over 100 years of grazing, these impacts on the dispersed grazing landscape are continuing and cumulative (BLM 2006).
- 4.10. BLM monitored five sites Flodine Park and eight sites in Yellow Jacket Allotment in 2014 and attributed no impacts directly to permitted livestock grazing (BLM 2014). At this point these sites had not been subject to permitted livestock grazing for nine years, and the report did not speak at all to impacts from trespass horses.

This finding directly contradicts the 2005 BLM EA at p. 47 , which noted:

Fifteen archaeological and historic sites have been recorded within or in close proximity to livestock concentration areas within this allotment [Flodine Park]...Livestock impacts such as trailing and trampling, and/or the presence of range improvements within site boundaries were noted on the maps and/or site forms for six of these sites. Extensive disturbance was noted on the forms for three sites. Two of these sites had extensive livestock trampling noted, while the other had been "greatly compromised" by construction of a stock pond.

- 4.11. Allotments assessed by BLM in Colorado as “improve existing conditions” predominantly demonstrated moderate and heavy impacts to archaeological sites from grazing (BLM 2006)
- 4.12. The most severe livestock grazing impact is the creation of sheet wash erosion and rill formation, which exists on both CANM allotments (BLM 2006).
- 4.13. As of 2014, only 5% of the Yellow Jacket allotment had been intensively inventoried (Class III) but of the 96 known archaeological and paleontological sites 79% of those recorded were considered eligible or potentially eligible to the National Register of Historic Places (CANM14012b, 2014).

- 4.14. Monitoring of cultural resources in allotments will not protect those sites from impacts from livestock but will merely identify when those impacts occur.
5. Great Old Broads for Wilderness sent a Freedom of Information Act request on October 16, 2015, for which a response has not been received, but which may contain information relevant to analysis of all alternatives in the Yellow Jacket and Flodine Park EA for which these are scoping comments:

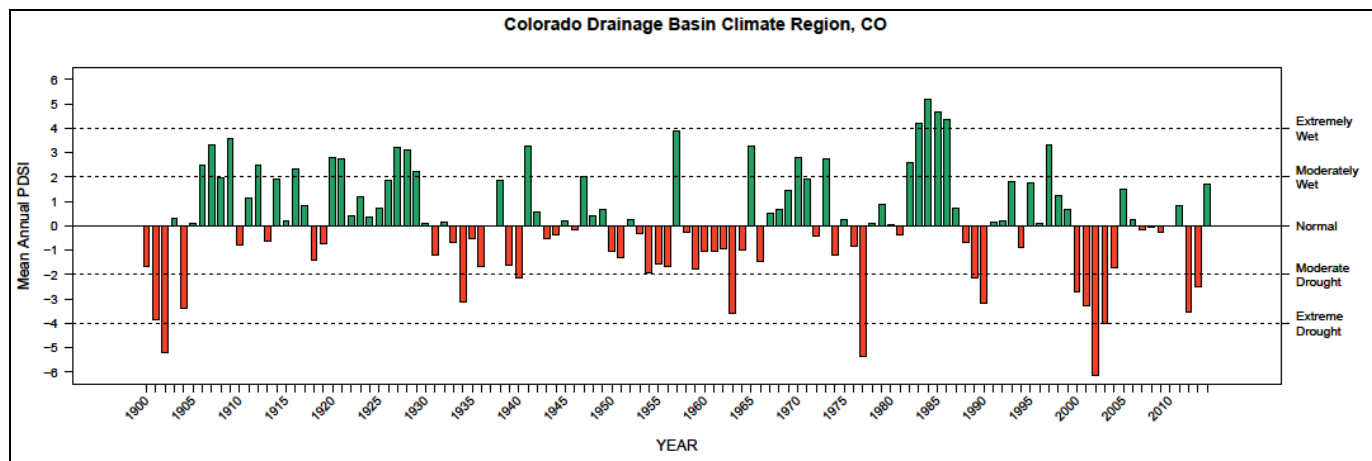
All cultural resource notes, analyses and files directly related to CO-SJPLC 03-099 EA, Livestock Grazing Permit Renewal for Yellow Jacket, Cahon Mesa, Goodman Gulch, Sand Canyon East, Sand Canyon West, Flodine Park and Hamilton Mesa Allotments (completed in 2005), including original analyses completed between 2000 and 2005 for Flodine Park and Yellow Jacket (i.e. not the summary for these two allotments included in the 2014 analyses).

6. Affected Environment

The EA will need to include summaries of data on the following conditions relevant to grazing/non-grazing determinations in Flodine Park and Yellow Jacket Allotments:

6.1. Significant Issue: Global Warming/Climate Change trends and assessments

- 6.1.1. Analysis of drought temperature, precipitation patterns and trends in the region, using data at the most relevant site and scale. See, for instance, the following analysis of drought using the Palmer Drought Severity Index for the Colorado Drainage Basin 1900-2014 (which includes CANM): Note that 9 of the last 15 years have been below normal for soil moisture:



- 6.1.2. The Department of Interior's North Central Climate Science Center exists to help entities such as CANM to assess climate trends and predictions
- 6.1.3. Analysis of the cumulative impacts of ungulate grazing and global warming impacts. (See, e.g., Beschta, et al. 2013)
- 6.1.4. Utilization of best available science regarding global warming impacts and biological crust, e.g., Ferrenberg, et al 2015, which indicates temperature increases and trampling have the same effect of eliminating or driving biological crusts back to early seral stages

6.2. **Rangeland Health Assessments.**

- 6.2.1. Include web access to the UTMs of each Rangeland Health Determination and the RLH Evaluation data
- 6.2.2. Include, at least in the Appendices, site-by-site comparisons of the 2001 and 2016 Rangeland Health Standards Assessments (including 2016 RLH Assessments of property acquired since 2001).
- 6.2.3. Include assessments of all riparian areas including web access to the riparian assessment data

6.3. **Map of soils capable of supporting at least 20% cover biological soil crusts.**

See, e.g., the virtual tour of Flodine Park and Yellow Jacket Allotments, with photos indicating biological soil crusts are present in numerous soils throughout Yellow Jacket and Flodine Park allotments. See also, Bowker, et al.

6.4. **Assessment of general seral status of biological soil crusts,** distinguishing between early seral (light cyanobacteria-dominated crusts), and mid-and later-seral crusts (dark cyanobacteria-dominated crusts, lichen and moss).

BLM has indicated that "Biological soil crust communities comprised of varied proportions of cyanobacteria, mosses and lichens are present throughout most upland environments" (BLM 2005).

- 6.4.1. Include methods used to assess the general status of biological soil crusts. See, e.g., the Grand Canyon Trust report (Trust 2015) on a 2014-2015 survey of biological soil crust, including light cyanobacteria, which is important as the early succession foundation of mid- and late-successional biocrust (i.e., dark cyanobacteria, lichen, moss).

- 6.5. **Assessments of vegetation production and utilization**
- 6.5.1. Distinguish between
 - 6.5.1.1. Exotic and native vegetation production
 - 6.5.1.2. Those species considered forage and those not considered forage for the purposes of determining forage
 - 6.5.2. Estimate the proportion of forage that will be utilized by cattle, trespass horses, and wildlife under each alternative
- 6.6. **List and map of invasive, exotic species**, including Russian thistle species, Russian olive, tamarisk cheatgrass, all known knapweed locations, and all other noxious weeds
- 6.6.1. Maps of upland locations where exotic species are at least 50% dominant
 - 6.6.2. Maps of all Russian olive and tamarisk locations
 - 6.6.3. Maps of locations where cheatgrass comprises at least 30% dominance
- 6.7. **Assessment of potential cattle impacts in Yellow Jacket Canyon.** The EA will need to assess all the alternatives in light of the following conditions in Yellow Jacket Canyon that have been noted by the BLM in the 2005 Environmental Assessment:
- 6.7.1. The sinuosity of Yellow Jacket Creek is low, width/depth ratio is high and the gradient is steep along much of the channel length.
 - 6.7.2. Recruitment of cottonwood is low. Tamarisk and Russian olive are encroaching upon cottonwood and willow species.
 - 6.7.3. The riparian herbaceous component is patchy.
 - 6.7.4. Unvegetated vertical banks exist along much of the channel indicating that lateral stream movement has been accelerated.
 - 6.7.5. Point bars are not revegetating as expected.
 - 6.7.6. Cottonwood within the abandoned floodplain are heavily browsed and have low vigor.
 - 6.7.7. For much of the public reaches, channel banks are vertical and unvegetated
 - 6.7.8. Fine sediments dominate the stream channel bottom
 - 6.7.9. The Conservation Fund-Wallace Jacket EA of 2009 notes that once reclaimed, proper management would ensure the viability of these rare ecological zones and provide habitat for sensitive species.
 - 6.7.10. Tamarisk and Russian olive are encroaching upon cottonwood and willow species.
 - 6.7.11. There are very few willow, *Carex* (sedges) and other wetlands species present along Yellow Jacket.
 - 6.7.12. Yellow Jacket Canyon traverses Yellow Jacket Allotment for 0.3 miles. Yellow Jacket Canyon along this reach is incised several feet and no longer has access to its original floodplain.

- 6.7.13. Riparian vegetation on the abandoned floodplain does not have adequate soil moisture to support a diverse age-class distribution or diverse composition of riparian species.
 - 6.7.14. In places, point bars are developing in the channel and are colonizing with herbaceous vegetation, but overall Yellow Jacket Canyon is in a nonfunctional state.
 - 6.7.15. Terraces above the riparian areas are dominated by sagebrush, greasewood or rabbitbrush with very little to no understory and are frequently bisected by active gullies and there is evidence of severe sheet erosion contributing to sedimentation of the riparian systems.
- 6.8. **Special Status wildlife species**, including most recent assessments of population status, habitat condition, and potential habitat occupancy in CANM and Flodine and/or Yellow Jacket Allotments
- 6.8.1. Colorado Pikeminnow – Endangered; recently found in Yellow Jacket Creek (The Conservation Fund-Wallace EA 2009)
 - 6.8.2. SW Yellow Flycatcher – Threatened; the entire Monument lies within the Upper Colorado River Recovery Unit
 - 6.8.3. Bald Eagle – Threatened; forage along McElmo Creek and Yellow Jacket Canyon (The Conservation Fund-Wallace EA 2009)
 - 6.8.4. Flannelmouth Sucker, Blue Sucker, and Roundtailed Chub¹ – BLM Sensitive species found in Yellow Jacket Canyon and reported from McElmo Creek. (Woodling 1985)
 - 6.8.5. Burrowing Owl - Colorado state sensitive species. Is seen throughout Yellow Jacket Allotment (The Conservation Fund-Wallace EA 2009)
- 6.9. Species with Potential Habitat in Flodine and/or Yellow Jacket Allotments: (BLM 2009)
- 6.9.1. Mexican Spotted Owl
 - 6.9.2. Ferruginous hawk - BLM-Sensitive species
 - 6.9.3. Allen's Big-Eared Bat
 - 6.9.4. Fringed Myotis
 - 6.9.5. Yuma Myotis
 - 6.9.6. Big Free-Tailed Bat
 - 6.9.7. Spotted Bat
 - 6.9.8. Peregrine Falcon
 - 6.9.9. Desert Spiny Lizard
 - 6.9.10. Longnose Leopard Lizard
 - 6.9.11. Mesa Verde Night Snake.
 - 6.9.12. Gunnison Sage Grouse - Overlay potential presettlement range of Gunnison sage grouse with both allotments and analyze grazing

¹ Colorado Parks and Wildlife has made a significant investment in Yellow Jacket Creek by stocking Roundtail Chub, a sensitive species that is a Candidate for listing by U.S. Fish and Wildlife Service,. The success of this stocking effort and the overall health of this population could be heavily influenced by the condition of the riparian habitat on the acquired lands.

management alternatives in light of their likelihood of providing specific suitable habitat conditions for Gunnison sage grouse.

6.10. Special Status Plants. The Yellow Jacket and Flodine Allotments are potential habitat for the following Special Status species.

- 6.10.1. *Amsonia jonesii* (Jones blue star), which has been found in the monument outside of the project area but likely occurs elsewhere.
- 6.10.2. *Epipactis gigantea* (Giant helleborine),
- 6.10.3. *Mimulus eastwoodiae* (Eastwood monkey flower),
- 6.10.4. *Erigeron kachinensis* (Kachina daisy),
- 6.10.5. *Astragalus cronquistii* (Cronquist milkvetch)
- 6.10.6. *Eriogonum clavellatum* (Comb Wash buckwheat)

Species 6.9.1-6.9.6 are listed in the 2008 Environmental Assessment for Aerial tamarisk treatment of Yellowjacket Canyon and tributaries.

- 6.10.7. *Astragalus calycosus* var. *scaposus* (Torrey milkvetch) . According to the SEINet data portal (<http://swbiodiversity.org/seinet>), *A. calycosus* occurs in or near the Yellow Jacket allotment near Risley Canyon (see catalog# 713790, Lynne Moore, 4919a 1995-06-03). This species is tracked by the Colorado Natural Heritage Program as a G5T3/S2. (i.e., it is ranked globally secure; but imperiled in Colorado)

6.11. Water quality assessments

- 6.12. **Cultural resource assessments**, including assessments of headcuts, incisions, gullies, sheet erosion, and other eroded sites that may be exposing cultural resources

7. Information sharing and public engagement.

The Agua Fria National Monument has pioneered an intensive effort to include all stakeholders at multiple points in their NEPA process. Field trips and indoor meetings all had opportunities for input and stakeholders were given handouts outlining the data that went into setting goals and objectives. They also made background data, meeting notes, and other information available on the web at

<https://sites.google.com/site/horseshoecoppercreekcrmp/> . Please consider undertaking a similarly transparent, open process for the Yellow Jacket and Flodine Park Allotments NEPA process.

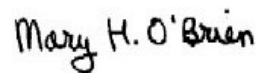
G. CONCLUSION

We thank you for consideration of these scoping comments for grazing management of Yellow Jacket and Flodine Park allotments. We look forward to participating throughout the EA process and to continue to observe conditions throughout Yellow Jacket and Flodine Park allotments, and offer suggestions for how livestock grazing can best be balanced with the protection of all

living communities and the values of all people who visit and value Canyons of the Ancients National Monument. Please let us know if you have any questions.

Again, we request that the Sustainable Grazing and Recovery Alternative, Section C within these comments, be retained "as is", as a cohesive proposal for consideration by BLM and all interested publics, alongside other alternatives. We request that if you are uncertain about the intention of particular alternative elements, that you will contact us to discuss those questions rather than risk misinterpretation in the EA analysis.

Sincerely,



Mary O'Brien, Ph.D., Botany
Utah Forests Program Director
Grand Canyon Trust
HC 64 Box 2604
Castle Valley, UT 84532
maryobrien10@gmail.com
(435) 259-6205



Rose Chilcoat
Associate Director
Great Old Broads for Wilderness
Box 2924
Durango, CO 81302
Office: [970-385-9577](tel:970-385-9577)
Cell: [970-799-3679](tel:970-799-3679)
rose@greatoldbroads.org



Laura Welp
Ecosystems Specialist, Northern Arizona/Southern Utah
Western Watersheds Project
6629 S. 43rd Street
Phoenix, AZ 85042
[480-271-0349](tel:480-271-0349)
laura@westernwatersheds.org

H. REFERENCES

[Note: A copy of all reference documents other than BLM documents is being mailed separately on a CD to the BLM on 11/19/2015]

Anderson, JE, and RS Inouye. 2001. Landscape-scale changes in plant species abundance and biodiversity of a sagebrush steppe over 45 years. *Ecological Monographs*, 71(4): 531–556.

Beschta RL, DL Donahue, DA DellaSala, JJ Rhodes, JR Karr, MH O'Brien, TL Fleischner, C Deacon. 2013. Adapting to climate change on western public lands: addressing the ecological effects of domestic, wild, and feral ungulates. *Environmental Management* 51:474–491.

[BLM] Bureau of Land Management, Department of Interior. 2005 *Canyons of the Ancients National Monument Environmental Assessment: Livestock Grazing Permit Renewal for Yellow Jacket, Cahone Mesa, Goodman Gulch, Sand Canyon East, Sand Canyon West, Flodine Park and Hamilton Mesa Allotments*.

[BLM] Bureau of Land Management, Department of Interior. 2006, *Summary of Livestock Grazing Impacts on Archaeological Sites Located on BLM –Administered Lands in Colorado, A Study of Cultural Resource Assessments for Grazing Permits from Fiscal Years 1998 to 2003*.

[BLM] Bureau of Land Management, Department of Interior. 2008. *Aerial Tamarisk Treatment Of Yellowjacket Canyon and Tributaries Environmental Assessment* .

[BLM] Bureau of Land Management, Department of Interior 2009. *The Conservation Fund-Wallace Acquisition Environmental Assessment*.

[BLM] Bureau of Land Management, Department of Interior. 2010. *Canyons of the Ancients, Final Resource Management Plan and Record of Decision*.

[BLM] Bureau of Land Management, Department of Interior. 2014. *Range Allotment Cultural Resources Assessment*.

[BLM] Bureau of Land Management, Department of Interior. 2015. *Agua Fria National Monument Draft Grazing Plan, HS-CC-CRMP in process*.

Bowker, M, and J Belnap. 2008. A simple classification of soil types as habitats of biological soil crusts on the Colorado Plateau, USA. *Journal of Vegetation Science* 10(6):831-840.

Bowker, M, ME Miller, J Belnap, TD Sisk, and N Johnson. 2008. Prioritizing conservation effort through the use of biological soil crusts as ecosystem function indicators in an arid region. *Conservation Biology* 22(6): 1533–1543.

Ferrenberg, S, SC Reed, and J Belnap. 2015. [Climate change and physical disturbance cause similar community shifts in biological soil crusts](#). *Proceedings National Academy of Sciences* 112(39):12116-12121

Holechek JL, H Gomez, and D Galt. 1999. Grazing studies: what we've learned. *Rangelands* 21(2): 12-16.

Horne, S, and J McFarland. 1993. *Issue Paper: Impacts of Livestock Grazing on Cultural Resources*. Unpublished document on file, Los Padres National Forest, 6755 Hollister Avenue Suite 150 Goleta, CA 93117.

O'Brien, Mary. 2015. *A Virtual, 2-Day Tour of Yellow Jacket and Flodine Park Park Allotment Areas; Canyons of the Ancients National Monument; Colorado*. Unpublished paper with georeferenced photos, October 30, 2015

[Trust] Grand Canyon Trust. 2015. *Grand Staircase-Escalante National Monument Biocrust Survey 2014-2015*. Unpublished report submitted to Bureau of Land Management.

[Trust] Grand Canyon Trust. 2008. *Economic Analysis of Alternatives in Grazing EISs for the Beaver Ranger District*. Unpublished

Woodling, J. 1985. Colorado's little fish. *A Guide to the Minnows and Lesser Known Fishes in the State of Colorado*. Colorado Division of Wildlife, Denver, CO.