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Letter and Attachments sent via email to: blm_ut_gs_comments@blm.gov

**RE: Skutumpah Terrace Sage Grouse Habitat Restoration
[DOI-BLM-UT-0300-2017-0003-EA]**

The following scoping comments are sent in addition to those sent by Grand Canyon Trust as a signer of comments with Southern Utah Wilderness Association and other conservation stakeholders. The scoping comments below provide a reasonable, feasible alternative (PHMA Alternative, Part III below) to be published “as is” within the upcoming EA and to be compared with other alternatives in the EA. In the comments with SUWA there is a call for an alternative that treats only within the PHMA. The scoping comments below provide such an alternative.

I. Background

The Bureau of Land Management (BLM) November 21, 2016 scoping notice for proposed vegetation treatments on approximately 19,000 acres on Skutumpah Terrace in Grand Staircase-Escalante National Monument states that:

1. The purpose of the project is “to restore habitat for Greater Sage-Grouse with vegetation treatments of encroaching pinyon and Utah juniper trees into sagebrush steppe habitat.”
2. Greater sage-grouse (GRSG) in the project area are “migratory and use the landscape at multiple scales.”

The scoping notice does not define what “migratory” means or indicate what seasonal use GRSG are making of the landscape at any of which multiple scales.

3. The notice notes that “Loss of habitat to pinyon and Utah juniper encroachment is one of the major threats to GRSG.”

Livestock grazing that removes cover and food for sagebrush-obligate and other sagebrush-using native species within sagebrush communities is not mentioned as another source of loss of habitat to GRSG.

4. The proposed project involves
 - a. removing encroaching pinyon and Utah juniper within GRSG habitat
 - b. treating “decadent” sagebrush stands to rejuvenate the understory [for GRSG use? Use by other sagebrush-dependent species? Cattle?]
 - c. filling in gullies and washes to address accelerated erosion
 - d. applying Tebuthiuron to “maintain desired sagebrush steppe conditions.” What sagebrush steppe conditions are desired is not indicated.
5. Treatments are proposed within the PHMA, Opportunity Habitat, and “historical GRSG habitat” on Timber Mountain and Red Breaks.
6. Preliminary issues identified in the scoping notice include “impacts to the livestock operator” but fail to identify three related, significant issues:
 - a. Livestock impacts on GRSG habitat and sagebrush community conditions (including creation of incised channels)
 - b. Climate change trends (especially drought and higher temperatures) and their projected impacts on GSENM/Colorado Plateau vegetation, including pinyon-juniper, and GRSG.
 - c. Cumulative impacts of livestock grazing and climate change.

Past GSENM vegetation treatments have been characterized by

1. Numerous “failures” that have been unexplained as to cause
2. Use of ground-disturbing, heavy-equipment in vegetation treatments
3. Lack of establishment of quantified desired treatment outcomes prior to treatment
4. Lack of post-treatment monitoring
5. Lack of thresholds for judging success or failure of treatments
6. Lack of cattle-free exclosures to separate treatment results from results of cattle-grazed treatments
7. Failure to consider biological soil crusts in treatments and cattle management
8. Focus of treatments on producing forage for cattle at the expense of native vegetation, archeology, and soil erosion.

Therefore we offer the PHMA Alternative to be considered and fully analyzed in the EA that provides for phased, least-impacting treatments within the area’s Priority Habitat Management Area for GRSG. If the treatments in the first phase and second phase result in meeting quantitative, desired post-treatment conditions for use of the habitat for both GRSG and sagebrush-obligate species, future treatments might be undertaken with some degree of confidence in the Opportunity areas with a separate Environmental Assessment. There appears to be no indication that the proposed treatments outside the Opportunity areas are intended for GRSG restoration.

II. Significant information needed in the EA

The following information seems basic to understanding current conditions and trends in the project area and GRSG. Presumably the BLM itself is wanting to have and use such information before they make final decisions among alternatives in this EA. This information will allow for objective assessment by both the BLM and public of a full range of reasonable alternatives in the EA:

1. Present (ideally graphically) temperature and precipitation trends for the project area and GSENM for the full length of time for which records exist.
2. Map and present all data BLM has of:
 - a. All historical data of greater sage-grouse (GRSG) seasonal use in GSENM and relevant BLM Districts
 - b. Current GRSG seasonal use (e.g., winter use or lekking/nesting, early season brood-rearing, late season brood-rearing) by location and number of GRSG in the project area, GSENM, and relevant BLM Districts.
 - c. Potential GRSG habitat (by season of use) in GSENM, with the scientific basis for determination of potential habitat and season of use
 - d. Nearest potential habitat (by season of use) that is not present in GSENM (e.g., late summer brood rearing) but which is predicted by BLM to be accessible to GRSG that would potentially make use of the proposed GSENM treatment areas.
3. Map and present all data BLM has within the proposed project area of:
 - a. Historic climax plant communities
 - b. Ecological Site Description soils and associated potential vegetation
 - c. Potential habitat for sagebrush-obligate species
 - d. Soils of potential biological soil crust cover of at least
 - e. Cover of biological soil crust (distinguishing light cyanobacteria, dark cyanobacteria, moss, lichen)
 - f. Size/density of pinyon, juniper
 - g. Size/density/species of sagebrush
 - h. Exotic and invasive species greater than 20% cover
 - i. Current authorized and user-created motorized vehicle routes
 - j. Sources of water for GRSG by season of use in the proposed treatment area
 - k. Fences and water transport, storage, and 20 use within and near the proposed treatment areas
 - l. Incised channels

[Note: These data should be summarized and mapped in the EA for the average reader, but the underlying data will need to be publicly available for independent data analysis by interested stakeholders.]
4. Describe:
 - a. all monitoring results of previous PJ removal/sagebrush treatment projects undertaken for sage-grouse habitat in GSENM and relevant BLM Districts for
 - i. native and exotic vegetation outcomes; and
 - ii. subsequent GRSG use.
 - b. all post-treatment monitoring results of previous herbicide treatments within PJ and sagebrush communities within the GSENM
 - c. relevant scientific research (including climate change research) for projecting post-treatment vegetation and sage-grouse results for each type of proposed treatment with and without livestock grazing on comparable lands
 - d. availability (by pounds) and location of origin of native seed for seeding in the treatment areas.

III. Proposed PHMA Alternative

1. Sage grouse habitat restoration treatments are undertaken only:
 - 1.1. Within PHMA areas; and
 - 1.2. on sites within PHMA areas where GRSG use of the habitat is projected following treatment
2. Phased restoration treatments
 - 2.1. Phase I: Undertake treatments with least-disturbance of soil only in eastern half of PHMA area
 - 2.2. Phase II: Undertake treatments with least-disturbance of soil in western portion of PHMA area if Phase I has resulted in meeting sagebrush community desired outcomes that have been established before Phase I treatments.
3. PJ treatments
 - 3.1. Remove PJ only where
 - 3.1.1. The soil has been demonstrated to support sagebrush as the dominant shrub.
 - 3.1.2. Where sage-grouse use of habitat from which encroaching PJ has been removed seems likely based on GRSG research
 - 3.2. Remove PJ by chainsaw to avoid unnecessary ground disturbance
 - 3.3. Move slash without ground-disturbing heavy equipment to the PHMA-area incised channels and on surrounding land to prevent livestock use of any area within 15' of the head and edges of the channel
 - 3.4. Incorporate beaver dam analogs (BDAs) with the slash and maintain as necessary for stepwise incorporation of sediment.
4. Sagebrush community for biodiversity
 - 4.1. Establish peer-reviewed, quantitative desired outcomes for sagebrush understory vegetation (shrub, grass and forb species and cover; biological soil crust) prior to approval of the project so the project results can be used adaptively to determine whether to initiate Phase II in the PHMA
 - 4.2. No thinning of sagebrush is undertaken for restoration of winter habitat for Greater sage-grouse.
 - 4.3. If thinning of sagebrush is undertaken to meet the needs of sagebrush-obligate species, quantitative desired conditions and thresholds for habitat outcomes for those species must be developed prior to approval of the project.
5. Cattle grazing
 - 5.1. Minimize cattle utilization of sagebrush understory to 0-30% as necessary, using the BLM best judgment, to obtain the quantitative, desired understory outcomes (4.1).
 - 5.2. Cattle will not graze within the PHMA between November 15 and March 15 in potential sage grouse winter habitat; and will not grazing within the PHMA during the growing season in areas of other projected sage grouse habitat.
6. Seeding
 - 6.1. Use only native seed of species native to GSENM for seeding, and the most locally-sourced native seed available
 - 6.2. Any seeding of an area would include comparable seeding within the area's enclosure(s)

7. Herbicides
 - 7.1. No herbicides will be used
8. Monitoring
 - 8.1. Establish 10 welded wire panel fence livestock enclosures (31' X 31') across Phase I treatment sites, each with a paired, staked 31' X 31' area outside plot.
 - 8.2. Before and if Phase II treatments are undertaken, establish 10 welded wire panel fence livestock enclosures (31' X 31') across Phase II treatment sites, each with a paired, staked 31' X 31' area outside plot.
 - 8.3. Record baseline data for desired post-treatment vegetation cover conditions (including biological soil crust) (4.1) inside/outside each enclosure prior to treatments
 - 8.4. Annually measure inside/outside enclosures to determine whether quantitative desired outcomes for GRSG are being obtained inside and/or outside.
 - 8.5. Notify interested stakeholders of planned monitoring dates for each enclosure.
 - 8.6. Annually document GRSG use within the areas treated and in the vicinity of GSENM.
 - 8.7. Provide a baseline assessment on permanent, 100m point-intercept transects of biological soil crust cover (including light cyanobacteria) within each proposed treatment area; and assess immediately after treatment and annually thereafter.
9. Adaptive management thresholds
 - 9.1. If in any year the understory desired conditions in the 31' X 31' outside plots fall below 75% of those inside the enclosures, change grazing management the following season using BLM best judgment as to what grazing intensity (if any) will result in the 75% threshold being met or exceeded.

IV. Rationale for Components of Proposed Alternative

It is extremely important that the BLM neither insert new features nor delete portions of the proposed PHMA Alternative, as it is internally consistent, reasonable, and feasible. The scoping notice has said that the purpose of the vegetation project is:

to restore habitat for Greater Sage-Grouse with vegetation treatments of encroaching pinyon and Utah juniper trees into sagebrush steppe habitat.

The PHMA alternative meets the purpose, though the BLM has been unclear as to what type of seasonal use Greater Sage-Grouse (GRSG) the vegetation project is geared toward. As noted in Section II of these comments, much more complete information will be needed in the EA for the BLM and public to be able to assess consequences of the various alternatives.

While Opportunity Areas would not be treated in the PHMA Alternative, they could be treated in the future under a separate NEPA process pending the outcomes of PHMA treatments. In the scoping document, the BLM does not seem to expect any accountability for documenting vegetation treatment results for GRSG habitat (e.g., in PHMA) before undertaking treatments in the lower-priority Opportunity Areas and is proposing treatments outside the Opportunity Areas that appear to have nothing to do with GRSG and everything to do with spending available money for removing PJ for cattle forage.

Soils that may once have been dominated by sagebrush may, with climate change, become dominated by PJ. At the same time, however, research is finding that pinyon pine is exhibiting high vulnerability to drought and/or heat (Barger and Woodhouse 2015, Breshears et al 2015, McDowell et al. 2015, Redmond, et al. 2012, Redmond, et al. 2013, Williams, et al. 2010)

Indiscriminately removing PJ as if it were one species instead of two has the potential to accelerate conversion of PJ to J alone in GSENM. Thus the EA must consider projected increasing temperatures and drought, reduced vegetation productivity, reduction of C3 grasses, and even die-offs of various plant species (e.g., pinyon).

The stated scoping notice intent of the BLM to convert and maintain the project area in sagebrush steppe “in perpetuity” may be simply a futile, resilience-busting, and economically unsound practice as climate change inevitably alters vegetation composition in GSENM. The focus of the BLM should be to retain resilience of ecosystems, not artificially prop up vegetation types that are changing due to global warming. The irony of the BLM simultaneously proposing to permit expansion of the Alton Coal Mine in GRSG habitat while purporting to undertake vegetation treatments to restore some seasonal portion of GRSG habitat in GSENM is not lost on us.

The PHMA Alternative limits PJ removal to areas within the PHMA where sage grouse use may be most likely in the future. If in fact the treatments do not result in much more than disturbed ground, loss of biological crust, exacerbation of invasive species presence, and/or cattle consumption and/or failure of grasses due to drought, the losses will at least have been minimized in comparison to generating similar results throughout the Opportunity Areas and beyond.

Further, the PHMA limits potential losses by dividing the PHMA treatments into Phase I and Phase II, with Phase II treatments in the western half of the PHMA dependent on Phase I outcomes meeting defined desired conditions and thresholds. This is accountability and adaptive management.

Similarly, the EA needs to consider biological soil crust. The use of heavy equipment on GSENM without facing the reality that most of GSENM is already lacking its potential biological soil crust skin (Grand Canyon Trust 2015); and that higher temperatures and drought have been shown to reduce lichen, moss, and dark cyanobacterial crust (Ferrenberg, et al. 2015) is neither ecologically appropriate nor legal. The PHMA alternative focuses treatment on only PHMA, leaving all other BSC in the surrounding area undisturbed, and minimizes the soil impact by using chainsaws only for treatment, and conveying slash to channel incisions without the use of heavy equipment.

Finally, while the BLM did not mention in the scoping notice the cumulative impact of cattle grazing with proposed vegetation treatments, let alone with drought and higher temperatures, the PHMA alternative does include cattle management in its prescriptions.

1. Sage grouse habitat restoration treatments

Treatments are undertaken under this EA only within PHMA areas in order to avoid disturbance of non-PHMA areas if PHMA-area treatments are not successful.

2. Phased treatments

Treatments within the PHMA area are phased to insure that monitoring and adaptive management are employed and that damage is minimized if in fact Phase I treatments do not result in attainment of desired GRSG habitat outcomes.

3. Pinyon-juniper treatments

Removal of PJ is undertaken only with chainsaws to minimize soil disturbance and move slash without ground-disturbing machinery. PJ treatments do not take place outside the PHMA, in order to minimize cumulative stress on climate change-stressed pinyon. PJ treatments could potentially be undertaken in Opportunity Areas in the future if the results of the PHMA treatments have been shown to successfully restore GRSG habitat and use by GRSG.

4. Sagebrush community

Native understory of the sagebrush community is important for sagebrush-dependent and sagebrush-using species other than GRSG.

Restoration of winter sage grouse habitat (which may be the season of use for sage grouse habitat in the PHMA) is hampered by thinning of sagebrush.

5. Cattle grazing

Cattle grazing selectively removes plant species, facilitates the establishment and spread of invasive species, tramples biological soil crust, and exacerbates channel incision. Cattle grazing within the treatment areas must be managed to be compatible with support of sagebrush-dependent species, including but not limited to GRSG; reduction of channel incision; support and restoration of biological soil crust to prevent further erosion; and support of native understory vegetation.

6. Seeding

Seeding of native plants (preferably of local origin) is compatible with restoration of GRSG and other sagebrush-dependent species and with the Monument Management Plan.

7. Herbicides

The use of the non-selective, highly persistent Tebuthiuron, as proposed by the BLM, is neither necessary for restoration of GRSG habitat nor ecologically supported in GSENM..

8. Monitoring

Public investment in GRSG restoration treatments must be monitored long-term for accountability and adaptive management. There is no way to separate the impacts of drought and temperature on restoration treatment outcomes from cattle grazing without exclosures. The exclosures provided in the PHMA Alternative cost approximately \$408 each for materials – a worthwhile investment in the only means known of separating treatment results from treatment results combined with cattle grazing. Absent a network of exclosures, any failure or disappointing results of the treatments are unable to be explained.

9. Adaptive management thresholds

Accountability for treatments requires quantitative, independently-measurable measures of success/failure.

V. Scientific Literature for Assessment of a Full Range of Reasonable Alternatives in the EA

Note: In scoping comments on the Skutumpah vegetation treatment submitted by Southern Utah Wilderness and other organizations, including Grand Canyon Trust, reference is given to many other scientific references.

The following are additional references. The 21 documents summarized in Grand Canyon Trust (2016) as well as the three other documents referenced below are being sent as separate attachments on Dec. 22, 2016.

1. Grand Canyon Trust. 2016. *Current and Projected Climate Change Impacts for the Colorado Plateau: Implications for the Skutumpah Vegetation Project, Grand Staircase-Escalante National Monument*. Annotated bibliography

Drought and higher temperatures, associated with current climate change as noted in the 21 documents summarized in this annotated bibliography, are relevant to the BLM proposals to remove pinyon pine and use heavy, ground-disturbing equipment, while presumably continuing to permit the cumulative impact of annual livestock grazing. The implications for conversion of pinyon-juniper to juniper, generation of dust, loss of sagebrush community productivity, and increased invasive grass coverage are also discussed and documented in these research papers.

The Trust is sending a copy of each document annotated in the bibliography for easy access of the BLM to this scientific literature.

2. [Grand Canyon Trust. 2016. *Grand Staircase-Escalante National Monument Biocrust Survey 2014-2015*](#)

This biocrust survey of 176 sites that are expected to support biological soil crust and are vulnerable to erosion found that at an overwhelming number of the sites, biocrust presence is largely reduced to early-seral, light cyanobacterial crust, if biocrust is present at all. As seen in Fig. 6 of this report, the Skutumpah area proposed for vegetation treatments has particularly high potential for biological soil crusts.

3. Redmond, M, Cobb, N, Miller, M, and Barger, N. 2013. Long-term effects of chaining treatments on vegetation structure of piñon-juniper woodlands of the Colorado Plateau. *Forest Ecology and Management* 305:120-128.

This article indicates that past pinyon-juniper removal treatments in GSENM have resulted in juniper return, but a lack of piñon return.

4. U.S. Drought Monitor. December 20, 2016. <http://droughtmonitor.unl.edu>

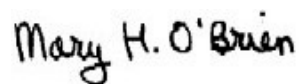
This December 20, 2016 map shows projected long-term (more than 6 months) abnormally dry conditions in GSENM. An updated map is posted every Thursday, in which the GSENM region is generally shown as experiencing dry or drought conditions.

5. [USFWS] U. S. Fish and Wildlife Service. 2016. *The Beaver Restoration Guidebook*.

Chapter 6 of this document describes the use of posts pounded into incised or straightened channels as a means of helping to capture sediment. This is mentioned in the PHMA Alternative as a means of anchoring PJ slash to help capture sediment for halting further incision.

The Trust thanks the BLM for considering these and other scoping comments. We hope that the BLM will let us know if any portions of the PHMA Alternative, outlined in this document, appear infeasible or contrary to BLM regulations. We would appreciate the opportunity to alter the PHMA Alternative accordingly. Otherwise, we trust that the PHMA Alternative will be fully analyzed “as is” in the EA in comparison with other alternatives.

Sincerely,



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