

**Southern Utah Wilderness Alliance
Grand Canyon Wildlands Council, Inc.
Grand Canyon Trust
The Wilderness Society
Wild Utah Project
Western Watersheds Project**

December 18, 2009

Vicki Tyler
Bureau of Land Management
Color Country District Office
176 East D.L. Sargent Drive
Cedar City, UT 84721

RE: Upper Kanab Creek Project (Environmental Assessment UT-040-09-03)

Dear Vicki,

Please accept and fully consider the following comments regarding the Upper Kanab Creek Watershed Vegetation Management Project (Environmental Assessment UT-040-09-03) (hereinafter EA or UKC EA) submitted on behalf of the Southern Utah Wilderness Alliance, the Grand Canyon Wildlands Council, Inc., the Grand Canyon Trust, the Wilderness Society, Wild Utah Project, and Western Watersheds Project (hereinafter SUWA).

The Southern Utah Wilderness Alliance's mission is the preservation of the outstanding wilderness at the heart of the Colorado Plateau, and the management of these lands in their natural state for the benefit of all Americans. SUWA is based in Salt Lake City, Utah, and has nearly 15,000 members, many of whom reside in Utah. SUWA has a deep and longstanding interest in the protection and preservation of all of BLM's wilderness-quality lands in Utah, including wilderness areas, Wilderness Study Areas (WSAs), non-WSA lands with wilderness characteristics, and lands identified by the Utah Wilderness Coalition (UWC) as possessing wilderness characteristics and proposed for wilderness in America's Red Rock Wilderness Act (ARRWA).

The mission of the Grand Canyon Wildlands Council, Inc. (GCWC) is to create and apply a dynamic conservation area network that ensures the existence, health, and sustainability of all native species and natural ecosystems in the Grand Canyon ecoregion. This mission is both visionary and scientific. GCWC accomplishes its mission through effective and efficient conduct and assessment of scientific research and by offering creative, science-based solutions to land stewards, public citizens, and other conservation groups, through respectful communication in a spirit of good will.

The mission of the Grand Canyon Trust (GCT) is to protect and restore the Colorado Plateau — its spectacular landscapes, flowing rivers, clean air, diversity of

plants and animals, and areas of beauty and solitude. GCT works toward creating a region where generations of people and all of nature can thrive in harmony. GCT's vision for the Colorado Plateau 100 years from now has three key facets: to ensure that the region is still characterized by vast open spaces with restored, healthy natural areas and habitat for all native plants and animals, to ensure that human communities enjoy a sustainable relationship with the natural environment, and to ensure that people who live and visit the Colorado Plateau are willing, enthusiastic stewards of the region's natural resources and beauty.

The mission of The Wilderness Society (TWS) is to protect wilderness and inspire Americans to care for our wild places. TWS has worked for more than 70 years to maintain the integrity of America's wilderness and public lands and ensure that land management practices are sustainable and based on sound science to ensure that the ecological integrity of the land is maintained. With more than half a million members and supporters nation-wide, TWS represents a diverse range of citizens.

Founded in 1996, the mission of the Wild Utah Project (WUP) is to maintain and, where needed, restore the health of our natural lands in Utah and adjoining states. We do this by applying the principles of conservation science to land management. WUP provides scientific research, technical support including the development of ecological assessment methods and conservation tools, and computer mapping analyses using Geographic Information Systems (GIS) to land managers, Citizen Activists and other conservation partners.

The mission of Western Watersheds Project (WWP) is to protect and restore western watersheds and wildlife through education, public policy initiatives and litigation. WWP is a non-profit conservation group founded in 1993 with 1400 members and with field offices in Idaho, Montana, Utah, Wyoming, Arizona and California. WWP works to influence and improve public lands management in 8 western states with a primary focus on the negative impacts of livestock grazing on 250,000,000 acres of western public lands.

The lands identified for treatment in the UKC EA include thousands of acres proposed by the Utah Wilderness Coalition for wilderness in ARROW. *See* Map attached as Exhibit A indicating, in orange, the areas where proposed treatments would conflict with lands the UWC has identified as possessing wilderness characteristics.¹ The comments below raise many of the same concerns raised by SUWA in its scoping comments dated July 12, 2009, as well as some additional issues that have not been previously addressed.

¹ Due to the large number of exhibits cited in these scoping comments, SUWA will copy the exhibits onto a CD and mail them to BLM along with a hard copy of these comments. Many of these same exhibits were cited by SUWA and supplied to BLM in scoping comments dated July 12, 2009. For clarity's sake, and to ensure the completeness of these comments, SUWA will those exhibits with these comments.

COMMENTS

I. The EA Fails to Adequately Define and Explain the Purpose and Need for the Project and Fails to Document the Need for the Proposed Treatments.

The EA fails to adequately define and explain the purpose and need for the proposed project. The stated purpose for this project is “to utilize a variety of resource management tools (such as prescribed fire, mechanical and chemical treatments, seedings and short-term grazing management) to enhance sagebrush/grassland areas and reduce invading pinyon/juniper throughout the project area.” EA at 2. As SUWA will explain in these comments, the utility of this purpose is disputed. In addition, the purpose is too narrowly stated since, among other reasons, it does not mention that treatments will occur within sagebrush-dominated landscapes.

The EA also fails to adequately document the need for the proposed treatments. One of the EA’s goals is to decrease the amount of pinyon-juniper “encroachment into areas historically dominated by sagebrush.” EA at 3. However, the EA fails to document the extent of the historic range of pinyon-juniper and sagebrush. Nor does the EA provide a map or describe the locations into which pinyon-juniper trees have supposedly encroached, other than areas that were previously treated and into which pinyon-juniper has recolonized. *See* EA at 15. The EA must quantitatively document and allow the public to review its data regarding the historic ranges of pinyon-juniper and sagebrush. BLM must also define what it means by “encroachment.”

Although the EA notes the need to reduce fuel loads within the Project Area, it does not present any evidence of catastrophic pinyon-juniper fires within the Project Area. *See* EA at 2, 14, 26. The EA states only that there have been “frequent but small fires” in the Project Area over the past 15 years. EA at 26. BLM should not conduct treatments to reduce the threat of catastrophic fire when it has failed to document the likelihood that a catastrophic fire will occur. Furthermore, the EA does not, but should, define what BLM means by a “catastrophic” fire.

The EA also fails to adequately explain and disclose the specific types of treatments that would be applied to particular areas. This lack of specificity results in the decision-maker and the public lacking sufficient information on which to form a well-reasoned and rational opinion of the proposal. The EA’s presentation of a general array of proposed treatment types for over 50,000 acres fails to comply with the National Environmental Policy Act’s (NEPA’s), 42 U.S.C. §§ 4321 *et seq.*, requirement that the agency fully disclose and analyze the potential impacts of the project proposal.

BLM has a broad authorization to manage the public lands pursuant to a multiple use mandate as set forth in its organic act, the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. §§ 1701 *et seq.* In addition, BLM must manage the public lands in such a manner that it prevents “unnecessary or undue degradation.” *Id.* § 1732(b). The wide-ranging purpose and need for this project has the potential to contribute to unnecessary and undue degradation of the land without providing the public or decision-makers adequate documentation or specificity regarding the project’s need for proposed, yet unspecified, treatments. SUWA also disputes that the purpose and need can only be

met by employing an unspecified array of mechanical, fire, and chemical treatment techniques over such a large area (i.e. 130,000 acres).

Comment: The EA must include an adequate description of the Project's purpose and need. The EA must support the purpose and need by specifying the type of treatments proposed for particular areas. The EA must also scientifically document the historic ranges of different types of pinyon-juniper and sagebrush, and the threat of catastrophic fire.

II. NEPA Requires BLM to Fully Analyze a Reasonable Range of Alternatives.

A. The EA Violates NEPA by Failing to Consider an Alternative with No Treatments in Proposed Wilderness Areas.

The objective of NEPA is to create “a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321. NEPA is a “look before you leap” statute. It requires federal agencies to take a “hard look” at the environmental impact of its actions prior to making any “irreversible or irretrievable” commitment of resources. 42 U.S.C. § 4332; *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983).

The importance of BLM's compliance with NEPA cannot be overstated. The NEPA process is BLM's primary mechanism for insuring that the agency is aware of current, on-the-ground conditions, and with that information in hand it can make informed decisions about how to comply with other statutory mandates. *See, e.g., Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (stating that NEPA aims to encourage more environmentally sensitive decision-making by requiring Federal agencies to take a “hard look” at the environmental consequences of their actions before they occur, thereby ensuring “that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts.”).

NEPA requires that federal agencies “shall . . . study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternate uses of available resources,” 42 U.S.C. § 4332(2)(E), and, accordingly, the UKC EA must include a discussion of these mandated alternatives. *See* 40 C.F.R. § 1508.9. Because the UKC EA does not consider a “conservation” alternative, e.g. an alternative that excludes treatments from certain environmentally-sensitive lands, such as those lands proposed for wilderness in ARROWA, the EA fails to consider a reasonable range of alternatives.

To fully comply with NEPA's requirement to consider a reasonable range of alternatives, the EA should include an alternative that excludes any and all treatments from the Timber Mountain area in the Grand Staircase-Escalante National Monument (GSENM or Monument) and the Upper Kanab Creek area managed by the Kanab field office, both of which have been proposed for wilderness in ARROWA. These two areas have been identified by the UWC as possessing wilderness characteristics and comprise

only a small portion of the proposed UKC Project area. *See* the lands colored orange in Exhibit A.

Comment: The EA should include a “conservation” alternative that precludes treatment in areas that have been identified by the UWC as possessing wilderness characteristics and are proposed for wilderness protection in ARROWA. This is a reasonable alternative that must be considered pursuant to NEPA.

B. The EA Must Consider an Alternative with No Proposed Treatments in Areas Identified by BLM as Possessing Wilderness Character, as Managed for Wilderness Characteristics, and in VRM Class II Areas.

In the Kanab Approved Resource Management Plan (RMP) completed last year, BLM identified certain lands as possessing wilderness characteristics. Kanab Record of Decision (ROD) and Approved Resource Management Plan (October 2008) at 28 and Kanab Proposed Resource Management Plan and Final Environmental Impact Statement (Kanab PRMP/FEIS) (July 2008) at Map 32. The UKC EA indicates that a portion of the proposed UKC Project would include lands that BLM identified in the RMP as possessing wilderness character, defined as lands that maintain an appearance of naturalness and offer opportunities for solitude, as well as primitive and unconfined recreation. Kanab ROD at 28; *see* Map attached as Exhibit B indicating, in orange, the areas where proposed treatments would occur on lands BLM has identified as possessing wilderness characteristics.

In order to retain the appearance of naturalness, and opportunities for solitude and primitive, unconfined recreation, BLM must not conduct any treatments in areas identified in the Kanab RMP as possessing wilderness character. The UKC EA indicates that impacts from the proposed alternative on opportunities for solitude and primitive recreation would only be present for “the very short term,” and that post-treatment impacts to the naturalness of the area would similarly be present only in the short term. UKC EA at 57. However, once the land and the vegetation that has been growing upon it are altered by humans and machines, such alteration cannot be undone. The proposed treatments will permanently impact the appearance of naturalness. Furthermore, when pinyon and juniper woodlands, sagebrush, and other vegetation are destroyed, opportunities for solitude diminish because reduced vegetative screening is available to the visitor.

Comment: The EA must consider a reasonable alternative that proposes no treatments in lands identified in the Kanab RMP as possessing wilderness character in order to retain the wilderness characteristics, i.e. the appearance of naturalness, and opportunities for solitude and primitive, unconfined recreation.

The Kanab ROD and Approved RMP also direct BLM to *manage* a portion of the lands in the Upper Kanab Creek area for wilderness character. Kanab Approved RMP at 27 citing Kanab PRMP/FEIS at Map 7. A portion of the UKC Project Area includes lands that BLM determined would be managed for wilderness character. *See* Map attached as Exhibit C indicating, in orange, the areas where proposed treatments would occur on lands BLM manages for wilderness character. For those areas BLM has

decided to manage for wilderness character, BLM must “[p]rotect, preserve, and maintain wilderness characteristics (appearance of naturalness, outstanding opportunities for solitude, or primitive and unconfined recreation).” Kanab Approved RMP at 87.

This is particularly important for Upper Kanab Creek because BLM explains that, along with Moquith Mountain, Upper Kanab Creek is the “largest stand-alone block[] of undeveloped land of all the inventoried areas for wilderness characteristics.” Kanab ROD at 27. Given the large size of the area, preservation of the wilderness characteristics in the Upper Kanab Creek area is especially important. Indeed, BLM notes that the size of the Upper Kanab Creek area “makes [it] more suitable for effectively protecting, preserving, and maintaining [its] wilderness characteristics.” Kanab ROD at 27. To achieve this preservation goal, BLM must ensure that the UKC Project does not decrease the area’s naturalness or opportunities for solitude, primitive, or unconfined recreation available in the vicinity. The best way to achieve this goal would be to prohibit treatment in areas within the Upper Kanab Creek area that are managed for wilderness character.

Furthermore, the UKC EA must prohibit all harvesting of wood products from the Upper Kanab Creek area that is managed for wilderness character, limit mechanical treatments that require off-road travel to designated routes only, and prohibit the establishment of new rights-of-way. *See* Kanab Approved RMP at 87. These considerations must be taken into account and applied to those small fingers of land that appear in orange on the Map attached as Exhibit C where the UKC Project overlaps with lands managed for wilderness character in the RMP. The best and only way to fully ensure that the visitors to this area will not observe human impacts on these wilderness character lands is to leave these areas in their natural state, untreated.

Comment: The EA must consider a reasonable alternative that proposes no treatments in lands identified in the Kanab RMP to be managed for wilderness character in order to retain the natural character of the Upper Kanab Creek area that is managed for wilderness character and to comply with the Kanab RMP and NEPA.

Furthermore, the Upper Kanab Creek area managed for wilderness character is designated as Visual Resource Management (VRM) Class II. *See* EA at Map 6. As the Kanab ROD states, VRM Class II requires that “changes to the landscape must be low, thus safeguarding the visitation and tourism industry, which is a significant contributor to the Kanab economy.” Kanab ROD at 27. The Kanab ROD requires that BLM projects, such as the UKC Project, do not interfere with the area’s natural beauty or with tourists’ enjoyment of this area. Destruction of vegetation would certainly impact the visitor’s scenic experience in the Upper Kanab Creek area. In order to comply with the VRM Class II management requirements, BLM must exclude VRM Class II areas from treatment.

Comment: The EA must consider a reasonable alternative that proposes no treatments in lands identified in the Kanab RMP as VRM Class II areas, in order to comply with the RMP and NEPA.

C. The EA Fails to Fully Analyze the No Action Alternative.

As discussed above, NEPA requires BLM to fully analyze reasonable alternatives. The “No Action” alternative is a reasonable alternative that must be fully analyzed, so that the potential direct, indirect and cumulative impacts are evaluated and disclosed. Such analysis allows the decision-maker and the public to be fully informed, and better able to assess the proposal. *See Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-30 (9th Cir. 1988) (requiring full analysis of no action alternative even if an environmental impact statement (EIS) not required); *see also Pennaco Energy, Inc. v. U.S. Dep’t of the Interior*, 377 F.3d 1147, 1162 (10th Cir. 2004)) (“In order to provide ‘a clear basis for choice among options by the decisionmaker and the public,’ an agency’s EIS must consider the ‘no action’ alternative. 40 C.F.R. § 1502.14 (d) (EIS shall ‘[i]nclude the alternative of no action’).” The Upper Kanab Creek EA fails to adequately analyze the No Action alternative.

Comment: BLM must fully analyze the impacts of the No Action alternative and make this analysis available to the public and the decision-maker in order to comply with NEPA.

D. The EA Must Consider an Alternative that Uses Natural and Prescribed Fire Exclusively.

Fire is the most natural tool to use in combating encroaching or invasive species, and has the potential to restore the landscape to its most natural state more quickly than other treatment techniques do. Indeed, one of the goals of the UKC Project to imitate the effects of fire since fire is no longer a natural part of the landscape. *See EA at 2.* Therefore, the EA must include an alternative that proposes exclusively natural and prescribed fire treatments. Natural and prescribed fire are the best methods to use to ensure that the ecosystem remains in the most natural condition possible, and SUWA commends BLM’s inclusion of prescribed fire in the EA.

Prior to and following a burn, livestock should be removed from the area. *See Kerr, Andy and Salvo, Mark, Managing Western Juniper to Restore Sagebrush Steppe and Quaking Aspen Stands*, Sagebrush Sea Campaign at 14-15, 18 (Jan. 2007) (attached as Exhibit D). And, as always, BLM should monitor the area closely to ensure that invasive species and noxious weeds do not begin to dominate.

Comment: The EA must include the reasonable alternative of using natural and prescribed fire, exclusively. The alternative should incorporate prescribed fire along with natural fires to best mimic natural events and maintain the natural character of the landscape. Livestock must also be removed both before and after a burn and BLM must closely monitor burned areas for the invasion of noxious weeds.

SUWA commends BLM’s use and presentation of fire frequency over the past 15 years. *See EA at 26.* SUWA would also like to draw BLM’s attention to the following studies, Rhodes, Jonathan J. and Baker, William L., *Fire Probability, Fuel Treatment Effectiveness and Ecological Tradeoffs in Western U.S. Public Forests*, THE OPEN FOREST SCIENCE JOURNAL, Vol. 1 (2008) (attached as Exhibit E), and Baker, William L.,

Fire and Restoration of Sagebrush Ecosystems, WILDLIFE SOCIETY BULLETIN, Vol 34. No. 1 (2006) (attached as Exhibit F). Research suggests that fire does not return for dozens or even hundreds of years in some sagebrush ecosystems. It is thus important that BLM mimic the natural fire cycles and not manipulate the ecosystem more often than nature would.

Comment: BLM must only conduct prescribed fire treatments at the frequency that fire would naturally strike an area.

The study by Rhodes and Baker, attached as Exhibit E, although based generally on ponderosa pine ecosystems, is potentially relevant for the watershed-level approach taken for the UKC Project. The study explains that the effectiveness of fuels treatments in the western United States depends on a variety of factors. *Id.* After a treatment, fuels tend to rebound and the effects of the original treatment may be negated. *Id.* Thus, BLM must fully analyze the probability of future fires prior to conducting any treatments to reduce fuels, because, as the article explains: “If fire does not affect treated areas while fuels are reduced, treatment impacts on watersheds are not counterbalanced by benefits from reduction in fire impacts.” *Id.* at 2. Also, fire impacts on watersheds vary with the severity of the fire, as lower-severity fire has minimal watershed impacts. *Id.* at 2.

Comment: BLM must consider several quantitative, scientific studies relating to fire frequency and intensity for various vegetation types in order to have the best understanding of the natural fire regime.

E. The EA Must Consider an Alternative that Employs a Phased Approach to Implementing Treatments.

The UKC EA must consider an alternative the employs a phased approach to implementing treatments. Because the Project is significantly large and envisioned to last for 15 years, BLM must consider an alternative that divides the proposed treatments into stages. For example, three five-year stages would be appropriate. A staged approach would permit BLM to monitor the effectiveness of its treatments, collect quantitative data, and to assess the success and impacts of various treatments based on vegetation type, soil type, erosion rates, etc. *prior to* proceeding with the next stage of treatment. This information could then be used to guide the implementation of the subsequent treatment area. Under this approach, BLM would only begin work on the latter two stages after it has a better understanding of the impacts from the various treatments. Under the EA’s current, one-phase approach, BLM is intending to proceed blindly for a decade and a half without knowing whether various treatments will be successful.

A lot could change within the 15-year time span of the proposed project. For example, science on climate change and its particular effects in southern Utah will likely advance, and BLM will have more experience with vegetation treatments and will likely have a better understanding of what works and what does not. Accordingly, the UKC Project should be designed so that the priorities and effect of the Project can be reevaluated every five years. Treatments in latter stages should not occur until monitoring has revealed the success of earlier similar treatments.

Comment: The EA must consider an alternative that employs a phased approach under which extensive monitoring and evaluation of the various treatments occurs before treatments progress to subsequent stages.

F. The EA Should Consider an Alternative That Does Not Allow Treatments Near Cliff Edges

The cliff edges in Timber Mountain, Upper Kanab Creek, and other locations throughout the Project Area are home to a variety of native plant and animal species, and provide stunning views. Throughout the Project Area, raptors use the cliffs to scan their territory; on the western portion of the Project Area, Mexican Spotted Owls use the cliffs for nesting; big horn sheep frequent cliff edges and ledges; in the Timber Mountain area, relict stands of ponderosa pine survive near the cliff edges. In addition, the cliff edges remain largely undisturbed. Visitors driving north through Johnson Canyon and on other local roads are treated with a view of these spectacular cliff edges, topped with native, undisturbed vegetation. To protect the viewscape of and from these cliffs, as well as the species that live on and use them, BLM must consider an alternative that does not permit treatments within a half mile of any and all cliff edges in the Project Area.

SUWA understands, however, from a conversation with Vicki Tyler on December 14, 2009, that BLM does not agree with this suggestion because the half mile buffer from cliffs edges would nearly eliminate treatments altogether. Nevertheless, SUWA reiterates its comment that no treatments should occur within a half mile of cliff edges because this option would best protect the visual resources and important habitat along the cliff edges. Indeed, in the Upper Kanab Creek area managed for wilderness character and designated Visual Resources Management (VRM) Class II, and in the Timber Mountain area in the Monument also designated as VRM Class II, forgoing treatment is the only option that would maintain these wilderness and visual resource values.

Comment: In order to preserve the visual resources, wilderness values, and important habitat for native plant and animal species, the EA should consider an alternative that eliminates all treatments within a half mile of cliff edges.

III. Treatments in the Monument

A. Prior to Issuing its Decision, and to Comply with FLPMA § 201, BLM Must Conduct a Wilderness Inventory of the Timber Mountain Area in the Monument.

Section 201 of the Federal Land Policy and Management Act (FLPMA) requires BLM to conduct wilderness inventories and repeat these inventories as necessary to ensure the agency has an accurate understanding of the current conditions of the lands under its management. 43 U.S.C. § 1711. Under FLPMA, BLM “shall prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values . . . This inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values.” 43 U.S.C. § 1711(a). Thus, FLPMA requires BLM to identify any wilderness resources that exist by conducting wilderness inventories and repeating them as necessary to keep them up to

date. The Ninth Circuit Court of Appeals recently confirmed that wilderness characteristics must be inventoried under FLPMA Section 201. *Oregon Natural Desert Ass'n v. Bureau of Land Mgmt.*, 531 F.3d at 1114, 1119 (9th Cir. 2008). Therefore, BLM is required to consider whether, and to what extent, wilderness values are present in the UKC Project area and, if the values are present, whether the proposed vegetation project will impact these values.

The most recent BLM wilderness inventory in the Monument occurred in 1999, as part of the *1999 Utah Wilderness Inventory*. This wilderness inventory was not comprehensive and failed to include all of the lands within the Monument. Specifically, the 1999 wilderness inventory did not include Timber Mountain area (see, e.g. *1999 Utah Wilderness Inventory*) which is proposed for wilderness by the UWC in ARROW. Thus, in order to comply with FLPMA and ensure that it has an accurate understanding of the current on-the-ground conditions, BLM must inventory the Timber Mountain area for wilderness character. This inventory must occur *before* BLM issues its Decision on the proposed UKC project.

If BLM does not conduct a wilderness inventory of the area prior to issuing a decision on the UKC project, the Timber Mountain area must be excluded from treatment in order to preserve any wilderness values that remain undocumented. See 43 U.S.C. § 1711.

Comment: BLM must comply with FLPMA and conduct a wilderness inventory for the Timber Mountain area of the Monument prior to issuing its Decision on the UKC Project. If BLM does not conduct a wilderness inventory of these lands, or if the inventory determines that certain lands possess wilderness character, BLM must exclude such lands from treatment.

B. BLM Must Not Treat Areas in the Monument that are Designated VRM Class II.

The vast majority of the Project Area within the Monument, including the Timber Mountain area proposed for wilderness by the UWC, is designated as VRM Class II. See Monument Plan at 60; UKC EA at Map 6. To comply with VRM objectives, no treatments should occur within VRM Class II areas. The objective of VRM Class II areas is to “retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer.” Monument Plan at 60. Thus, to comply with the Monument Plan, changes to the landscape must not interfere with the area’s natural beauty or the visitor’s enjoyment of this area. Destruction of vegetation is not consistent with the management criteria for VRM Class II of retaining the existing character of the landscape and would certainly impact the visitor’s scenic experience in the Monument.

Comment: To comply with VRM Class II objectives and the Monument Plan, BLM must not conduct any treatments in areas designated VRM Class II.

C. For Proposed Treatments in the Monument, BLM Must Comply with the Monument Plan.

The Management Plan for the Monument contains management prescriptions that are more restrictive than the regulations that apply to most of the public lands managed by the BLM. For the portion of the UKC Project that lies within the Monument, BLM must comply with the Monument Plan, as well as the Proclamation establishing the Monument.

The Monument Plan and Proclamation explicitly state that the Monument was established for the purpose of scientific research. Specifically,

The Monument was created to protect a spectacular array of historic, biological, geological, paleontological, and archaeological objects. . . . The Proclamation, which is the principal direction for management of the Monument, clearly dictates that the BLM manage the Monument for ‘the purpose of protecting the objects identified.’ *All other considerations are secondary to that edict.*

GSENM Plan at 3 (emphasis added). Thus, the Monument Plan subordinates all projects, including vegetation projects, to the purpose of protecting the Monument’s resources. Consequently, should any historical, geological, paleontological, archaeological, or important biological objects and resources be discovered, BLM must preserve them in order to comply with the Monument’s Plan and Proclamation.

The Monument Plan requires that the Project Area will be surveyed for historical, geological, paleontological, archaeological, and significant biological resources as part of the EA process and that such inventories and survey results (except for privileged information) be provided to the public.

Comment: In order to comply with the Monument Plan, BLM must survey the proposed treatment area prior to issuing its Decision and prior to conducting treatments, and must avoid and protect any and all cultural, historical, paleontological, geological, archaeological, and significant biological resources that are discovered.

According to the map of the proposed action attached to page 106 of the EA and the description of Alternative D, the Monument-only alternative, the vast majority most of the treatments proposed in the Monument are pinyon-juniper treatments or retreatments. UKC EA at 22, 106. The Monument Proclamation specifically praises relict communities of pinyon-juniper that contain trees up to 1,400 years old. Proclamation 6920, Establishment of the Grand Staircase-Escalante National Monument (Sept. 18, 1996). Indeed, the Proclamation explains that these relict communities “establish a baseline against which to measure changes in community dynamics and biogeochemical cycles in areas impacted by human activity.”

SUWA appreciates BLM’s description, on pages 64–65 of the EA, of the distinctions between relatively young and relatively old pinyon and juniper trees. SUWA commends BLM on its effort to study the pinyon-juniper communities and to learn which stands contain exceptionally old trees and are located in soils and locations historically suited to pinyon-juniper; the pinyon-juniper communities in these areas should not be

treated. *Compare* EA at 64–65 with Exhibit D. Despite BLM’s descriptions of the age classes of the trees, however, BLM nonetheless states that it will engage in “selective thinning” of mature trees (i.e. trees that are over 150 years old) to achieve its fuels management goals. *See* EA at 64. To comply with the Monument Proclamation which glorifies relict trees, e.g. trees that are 1,000 years old, and to achieve the Monument’s research and preservation purposes, no treatments should occur in areas of relict vegetation.

Comment: To comply with the Monument Plan and Proclamation, BLM must not treat relict pinyon juniper trees.

The Monument Proclamation also states that the Monument contains “a spectacular array of unusual and diverse soils that support many different vegetative communities and numerous types of endemic plants and their pollinators.” Proclamation 6920. BLM must ensure that the UKC Project does not adversely impact these unusual and diverse soil types or the endemic vegetative communities and pollinators they support. SUWA commends BLM’s study of the soil types located in the Project Area. *See* EA at 30–33, Table 9. BLM must ensure that all treatments it plans to conduct match up with the soil types described in Table 9 on page 33 of the EA. Furthermore, if endemic vegetation and pollinators exist in the Project Area, no treatments should occur that have the potential to adversely impact these vegetative and pollinating communities.

Comment: To comply with the Monument Plan and Proclamation, no treatments should occur that have the potential to adversely impact endemic vegetation and their pollinating communities. Treatments should occur only in areas where soil studies indicate that such treatments would be appropriate. BLM must design a monitoring plan that takes into account soil properties, types, productivity, stability, and erosion rates.

To comply with the Monument Plan and Proclamation and to ensure that the Monument remains a frontier, BLM must not conduct any treatments on previously undisturbed areas. *See* Monument Plan at iii and Monument Proclamation. If treatments within the Monument occur at all, they can only occur in previously treated areas. Furthermore, the Monument Plan lays out specific guidelines for vegetation treatments and the UKC EA must fully comply with these guidelines. *See* Monument Plan at 26–31. For example, monitoring plots must be “established to determine the effectiveness of the treatments in achieving management objectives and to provide baseline data of overall change,” as well as to determine the presence of noxious weeds. Monument Plan at 27–28. Monitoring must include “species frequency, density, and distribution data, and will be part of the overall adaptive management framework.” Monument Plan at 27; *see also* Monument Plan at 28, Chapter 3 at 68–74.

Comment: To comply with the Monument Plan and Proclamation, BLM must not treat previously undisturbed areas. BLM must also comply with all other requirements laid out in the Monument Plan, including establishing monitoring plots, conducting a variety of monitoring, and complying with the adaptive management framework laid out in Chapter 3 of the Monument Plan.

IV. BLM Must Complete an Environmental Impact Statement for the UKC Project.

NEPA requires BLM to prepare an Environmental Impact Statement (EIS) for all major federal actions that may significantly affect the environment. *See id.* § 4332(2)(C); *see also Union Oil Co.*, 102 IBLA 187, 189 (1988). The Council on Environmental Quality (CEQ), an agency within the Executive Office of the President, has promulgated regulations implementing NEPA. Pursuant to those regulations, to determine whether an EIS is required, federal agencies may first prepare an EA. 40 C.F.R. § 1501.4. An EA must consider several factors to determine if an action will significantly affect the environment, thus necessitating the preparation of an EIS. *See* 40 C.F.R. § 1508.9.

In fact, an EIS “*must* be prepared if ‘substantial questions are raised as to whether a project . . . *may* cause significant degradation of some human environmental factor.’” *Id.* (emphasis in original) citing *Idaho Sporting Congress v. Thomas*, 137 F. 3d 1146, 1149 (9th Cir. 1998). Thus, the environmental impact need not be certain; as long as a project *may* impact the environment, an agency *must* complete an EIS. In determining whether an environmental impact “*may* cause significant degradation,” an agency must look at various “significance” factors. 40 C.F.R. § 1508.27. The “significance” factors are separated into “context” and “intensity” factors; context refers to the location of the impact and intensity refers to the severity of the impact. *Id.* After considering the “significance” factors in an EA, if an agency decides not to prepare an EIS, it must issue a Finding of No Significant Impact (FONSI) to justify its decision. *Id.* § 1508.13. The FONSI must provide a convincing statement of reasons why the action “will not have a significant effect on the human environment.” *Id.*

Because of the UKC Project’s significant size, long duration, sensitive lands involved (including lands within proposed wilderness areas and a national monument, and U.S. Forest Service lands), BLM should have prepared an EIS, rather than an EA. The UKC Project involves over 130,000 acres of land, nearly 90,000 of which are managed by two BLM field offices, Kanab and the Monument. EA at 1. This is a huge amount of land, which, due to its size, is significant under the “context” prong of CEQ’s significance factors. Under the preferred alternative, vegetation treatments are proposed on 51,600 of these acres over the course of 15 years. EA at 20. Thus, this EA is intended to remain in effect for the same amount of time that a Resource Management Plan is intended to remain in effect. RMPs are accompanied by EISs, not EAs, and the UKC Project likewise necessitates the completion of an EIS.

In addition, the FONSI does not provide a convincing statement of reasons why the UKC Project will not have a significant effect. *See* 40 C.F.R. § 1508.13. Indeed, BLM states that the very purpose of treating the Upper Kanab Creek watershed is to have a more holistic and significant impact on the entire watershed area. *See* EA at 1–3. Furthermore, some of the “intensity” determinations stated in the signed FONSI, namely factor numbers 3, 4, 5, 6, and 7, do not accurately reflect the impacts expected from this Project.

Specifically, SUWA questions BLM’s determination in factor 3, i.e. unique characteristics of the geographic area such as proximity to historic or cultural resources,

park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas. The FONSI concludes that unique geographical characteristics will not be impacted. *See* FONSI at (unpaginated) 3. However, the proposed action for UKC Project is located partially within the Grand Staircase-Escalante National Monument, which has been set aside for scientific, historical, and frontier values, and partially within an area that the BLM has determined possesses wilderness characteristics. Thus, the geographic area at issue unquestionably contains many unique characteristics.

In addition, SUWA questions BLM's determination in factor number 4, i.e. the degree to which the effects on the quality of the human environment are likely to be highly controversial. In regard to this factor, BLM stated that "[t]here is no scientific controversy over the nature of the impacts." UKC FONSI at (unpaginated) 4. To the contrary, in SUWA's scoping comments submitted on July 12, 2009, SUWA attached several studies as exhibits that address the scientific uncertainty and controversy over the nature of climate change, eolian dust, carbon sinks in soils, how to manage pinyon and juniper woodlands, control invasive vegetation, the natural fire cycle for different ecosystems, and the importance of biological crusts, all of which are factors that relate to the impacts the proposed UKC Project would have. *See* SUWA's Scoping Comments (July 12, 2009) attached hereto (without accompanying exhibits) as Exhibit G. As the exhibits attached to SUWA's scoping comments, the scoping comments themselves, and these comments, demonstrate, there is indeed scientific controversy over the nature of the impacts from this proposed Project. *Cf.* UKC FONSI at (unpaginated) 4.

And, in a supplemental letter dated October 12, 2009 (attached to these comments as Exhibit H), SUWA stressed the importance of including researchers from local universities, the U.S. Geological Survey (USGS), the Monument's Advisory Council, and/or other institutions, in the UKC Project to participate in the design and monitoring of the project, and to ensure that the impacts from the project are monitored and recorded in a scientific manner. Including scientists and researchers in the Project's design and monitoring is particularly important because there is scientific controversy and uncertainty over the nature of the proposed Project's impacts.

SUWA also questions BLM's determination of intensity factor 5, i.e. the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. The EA merely concludes that "[t]he project is not unique or unusual . . . There are no predicted effects on the human environment that are considered to be highly uncertain or involve unique or unknown risks." UKC FONSI at (unpaginated) 4. For many of the reasons discussed in the preceding paragraphs, SUWA likewise disagrees with BLM's conclusion on this issue. First, the exhibits attached to these comments, and SUWA's earlier scoping comments, relating to everything from the creation of eolian dust and its effects on Colorado's snowpack, to the increasingly dire effects of climate change in southern Utah, to the carbon sink potential of certain soils and vegetation types, indicates that this project involves unique and unknown risks.

Furthermore, the UKC Project is unique and unusual for its size and duration. Most vegetation projects on BLM lands concern significantly less than 50,000 acres and last for significantly less than 15 years. *See, e.g.,* Columbia Wildland/Urban Interface

Hazardous Fuels Treatment (DOI-BLM-UT-G020-2009-0059-EA) covering 1,400 acres; Little Baullie Mesa -- Fuels Reduction for Vegetative Restoration and Resource Protection (DOI-BLM-UT-Y020-2009-0002-EA) covering 1,700 acres; Ray Mesa Restoration Project Phase II (EA UT-060-2008-141) covering 5,000 – 7,000 acres, and lasting 5 – 8 years; Beaver Canyon Vegetation Treatment (UT-050-08-065 EA) covering a handful of acres.

Likewise, SUWA questions the conclusions BLM draws in factors number 6 and 7, i.e. the degree to which the action may establish a precedent for future actions with a significant effects or represents a decision in principle about a future consideration; and whether the action is related to other actions with individually insignificant but cumulatively significant impacts – which include connected actions regardless of land ownership. In regard to both factors, the EA states that “[s]ignificant cumulative effects are not predicted.” UKC FONSI at (unpaginated) 4. However, the research unequivocally demonstrates that climate change will have a significant impact on the desert southwest. *See, e.g.,* U.S. Geological Survey, *Impacts of Climate Change on Water and Ecosystems in the Upper Colorado River Basin* (August 2007) (attached as Exhibit I). With more drastic effects of climate change and increased surface disturbance, dust storms are expected to increase, impacting Colorado’s snowpack. Because the UKC EA would authorize surface disturbance and decrease vegetative cover in the short term, the EA must analyze the cumulative effects on this project from climate change and other factors not currently analyzed in the EA. Until BLM conducts this analysis, the FONSI cannot assert that no significant cumulative effects are predicted.

Comment: Due to the location of this project, and the significant potential impacts related to several of CEQ’s intensity factors, BLM must complete an EIS, not merely an EA, for this Project.

V. BLM Should Not Have Signed the FONSI Prior to the Completion of the Comment Period.

Two authorized officers for the BLM signed the FONSI for the UKC Project on November 12th and 13th, 2009, a week before the EA was released for a 30-day public comment period.² UKC FONSI at (unpaginated) 5; UKC Decision at (unpaginated) 1. By signing the FONSI prior to the completion of the comment period for the UKC Project, BLM prejudged the outcome of the Project and did not allow the public an opportunity to comment on the EA before BLM had made its determination that the Project would not have a significant impact on the environment. BLM’s prejudgment that an EIS will not be prepared violates NEPA. *See Davis v. Mineta*, 302 F.3d 1104, 1112 (10th Cir. 2002); *see also* 40 C.F.R. §1506.6 (“Agencies shall: (a) Make diligent efforts to involve the public in preparing and implementing their NEPA procedures.”).

SUWA understands from a conversation with BLM’s Vicki Tyler on December 14, 2009, that BLM has issued new NEPA guidance that governs the process and timing for the signing of FONSI and Decision Records. SUWA is interested in obtaining this guidance so that it can better understand BLM’s NEPA process.

² The Decision Record for the UKC EA has not yet been signed.

Comment: BLM's prejudgment, prior to the completion of the comment period, that an EIS is not required, which is based on unsupported conclusions that the UKC Project will not significantly impact the environment, violates NEPA.

VI. Vehicle Travel Must Be Limited to Designated Routes Only.

With the completion of the Kanab RMP and the Management Plan for the Monument, travel on lands within both the Kanab field office (with the exception of the open area in the Moquith dunes) and the Monument has been restricted to designated routes only. Kanab Approved RMP at 87; GSENM Plan at 46–48, Map 2. To comply with the RMP and the Monument Plan, mechanical treatment that requires off-road driving must not occur on any lands managed by either the Kanab field office or the Monument.

Comment: In order to comply with the Kanab RMP and the Monument Plan, the UKC EA must limit vehicle travel, including the use of mechanical vehicular equipment, to designated routes.

Off-road vehicle use is a significant threat to public lands in southern Utah. ORVs are associated with the ignition of wildfires, fugitive dust, erosion, and the spread of noxious weeds. Restricting ORV activity to designated routes helps to decrease the risk of invasive species, and will protect native species, air quality, water quality, and numerous resources such as cultural and paleontological resources. Reducing ORV use will also limit the creation of eolian dust which is currently wreaking havoc on Colorado's snowpack, to the detriment of all downstream water users. *See further discussion of climate change and air quality below.*

SUWA is concerned that the UKC Project could, indirectly, encourage illegal ORV use off of designated routes and into closed areas. When ORV users see that an area has been disturbed, they are more likely to travel off of the designated route and ride in those disturbed areas. As stated above, both the Monument Plan and the Kanab RMP make travel off of designated routes illegal, and BLM must ensure that the UKC Project will not increase illegal ORV use. SUWA commends BLM on its decision to create mosaic patterns and to feather the edges of treatments to make them appear more natural. *See EA at 56.* SUWA also urges BLM to pull treatments a minimum half mile away from all designated routes so that the treated areas do not tempt visitors off of designated routes.

Comment: BLM must take appropriate actions to ensure that treatments appear as natural as possible and do not invite visitors to travel off of designated routes.

VII. BLM Must Conduct a Class III Cultural Inventory of the Project Area Prior to Issuing its Decision and Must Avoid Any and All Cultural Resources Discovered.

The UKC EA states that cultural resource inventories will be conducted prior to treatment and that cultural resources will be avoided. UKC FONSI at (unpaginated) 4;

UKC EA at 44. SUWA would like to confirm that by an “intensive cultural resource survey,” BLM means that it will conduct a Class III survey as required by the National Historic Preservation Act (NHPA), 16 U.S.C. §§ 470 *et seq.* If this is not correct, please notify me. SUWA also requests that the results of the Class III survey be made available for public review and comment before any treatments occur, and that BLM consults with the State Historic Preservation Officer (SHPO) and the Tribes.

Comment: SUWA requests that BLM confirm that a Class III archaeological survey will be conducted, and that BLM will consult with SHPO and the Tribes prior to all treatments, and that all cultural resources will be avoided.

VIII. BLM Must Assess Alternatives and Impacts Using Quality Data and Scientifically Acceptable Methods of Analysis, Which Are Disclosed to the Public for Comment.

BLM cannot evaluate consequences to the environment or determine avoidable or excessive degradation without adequate data and analysis. NEPA requires a hard look at environmental consequences that is based on “accurate scientific information” of “high quality.” 40 C.F.R. § 1500.1(b). Essentially, NEPA “ensures that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 349. The Data Quality Act and BLM’s interpreting guidance expand on this obligation, requiring that influential scientific information use “best available science and supporting studies conducted in accordance with sound and objective scientific practices.” Treasury and General Government Appropriations Act for Fiscal Year 2001, Pub.L. No. 106-554, § 515. *See also* Bureau of Land Management, Information Quality Guidelines, *available at* http://www.blm.gov/nhp/efoia/data_quality/guidelines.pdf.

BLM’s internal guidance also recognizes the importance of accumulation and proper analysis of data. The agency’s Land Use Planning Handbook emphasizes the importance of using sufficient, high quality data and analytical methods, and making those available to the public. Appendix H of the Land Use Planning Handbook also directs: “The data and resultant information for a land use plan must be carefully managed, documented, and applied to withstand public, scientific, and legal scrutiny.” Appendix F-1 of the Handbook emphasizes the importance of providing a clear explanation of how analysis was conducted, stating: “Regardless of its source, sufficient metadata (data about data) should be provided to clearly determine the quality of the data, along with any limitations associated with its use.” In other words, appropriate analysis of data is as important as the accumulation of sufficient data. That the UKC EA is not technically a land use plan does not give the BLM carte blanche to base decisions on inadequate analysis or fail to disclose data and metadata. BLM should heed the mandate in the Handbook: the UKC proposal is a very large project extending across various ecosystems and elevations, that will span 15 years, approximately the same duration as a land use plan is intended to be in effect.

Further, both data and analyses must be disclosed to the public in order to permit the “public scrutiny” that is considered “essential to implementing NEPA.” 40 C.F.R. §

1500.1(b). The lack of data and vague descriptions of treatment methods contained in the EA fail to comply with either BLM's internal guideline or with NEPA's public scrutiny requirement. For example, pages 13 and 15 of the EA that discuss proposed treatment techniques state only that mechanical equipment, hand tools, seeding, chemicals, and grazing management will be used "as appropriate." Although Appendix 4 briefly addresses certain considerations for different treatment methods, the EA does not disclose the locations of such treatments or the analytical methods BLM will use to determine which treatment techniques it will apply to which areas. Nor does the EA disclose how BLM will determine which techniques to use. BLM's exceedingly vague descriptions of its proposed treatments violate NEPA and BLM's own guidance.

BLM's guidelines for implementing the Data Quality Act also reiterate that making data and methods available to the public permits independent reanalysis by qualified members of the public. In this regard, NEPA "guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 349. NEPA not only requires that BLM have detailed information on significant environmental impacts, but also requires that the agency make this information available to the public for comment. *Inland Empire Public Lands Council v. U.S. Forest Service*, 88 F.3d 754, 757 (9th Cir. 1996).

The UKC EA should disclose the data and analyses used so that the public may better scrutinize it. For example, a Map of the soil data cited in Table 9 of the EA should be included with the EA, so that the reader can match the soil type and the vegetation it supports to the proposed treatment areas. Also, BLM should disclose quantitative analysis, data, and studies regarding the impacts that UKC Project will have on climate change, air quality, wildlife species, including raptors, the California condor, sage grouse, and other relevant issues.

Comment: The EA violates NEPA and BLM's Handbook by its vague descriptions of proposed treatment methods and other issues that fail to disclose data and analyses for public scrutiny.

Where there is scientific uncertainty, NEPA imposes three mandatory obligations on BLM: (1) a duty to disclose the scientific uncertainty; (2) a duty to complete independent research and gather information if no adequate information exists unless the costs are exorbitant or the means of obtaining the information are not known; and (3) a duty to evaluate the potential, reasonably foreseeable impacts in the absence of relevant information, using a four-step process. Unless the costs are exorbitant or the means of obtaining the information are not known, the agency must gather the information in studies or research. 40 C.F.R. § 1502.22. Courts have upheld these requirements, stating that the detailed environmental analysis must "utiliz[e] public comment and the best available scientific information." *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1171-72 (10th Cir. 1999) (citing *Robertson v. Methow Valley Citizens' Council*, 490 U.S. at 350); *Holy Cross Wilderness Fund v. Madigan*, 960 F.2d 1515, 1521-22 (10th Cir. 1992).

The UKC EA must employ quantitative data in assessing the impacts of the various alternatives. However, the EA and FONSI violate NEPA by failing to account for the scientific uncertainty inherent for particular issues, including the potential for carbon sequestration in pinyon-juniper woodlands and their soils.

Comment: The EA and FONSI violate NEPA by failing to account for the scientific uncertainty inherent related to some issues.

IX. Rangelands Should be Rested for Two Seasons Following Treatments, and Larger Grazing Changes Should be Brought Forward as an Alternative.

SUWA commends the EA's preferred alternative's proposal to rest rangelands for a minimum of two seasons³ following treatment. *See* EA at 49. However, the EA fails to include scientific documentation that confirms that two years is sufficient. SUWA requests that the BLM include data that supports the proposed two-year rest, rather than longer rest periods. Following all treatments, BLM must monitor the health of the rangelands on both the Kanab field office and the Monument lands prior to allowing livestock to return. While the Monument Plan and Proclamation allow for the continued existence of livestock grazing in the Monument, neither the Plan nor the Proclamation envisions that cattle will be protected at the expense of other resources.

In fact, the Monument Plan states that livestock may be rested for *more than* two years and requires that a site evaluation occur "to determine when the native seedings should be grazed again and the effectiveness of the current or new grazing system on the persistence of native plants." Monument Plan at 26–27. To comply with the Monument Plan, BLM must conduct a site evaluation to determine the success of seedings prior to allowing livestock to return to the treated land.

Furthermore, studies show that keeping livestock grazing off of treated sites is critically important to restoring native ecosystems. *See, e.g.,* Exhibit D, *Managing Western Juniper* at 17-19. In addition, reducing livestock grazing over the long term could be fundamental to restoring the ecosystem using a holistic approach that will decrease the need for repeated vegetation treatments over time. The Sagebrush Sea Campaign handbook attached as Exhibit D provides useful management prescriptions for encroaching pinyon-juniper woodlands. To best protect the ecosystems, BLM should have carried forward the alternative to make permanent changes to grazing practices. *See* EA at 23.

Comment: BLM must rest land for at least two years following treatments and must use all of the best available information to determine if two years is sufficient and optimal. Before livestock is allowed back onto treated portions of the Monument, a site evaluation must occur. In addition, BLM should have carried forward the alternative to make permanent grazing changes in order to best restore the ecosystem over the long term.

³ SUWA would like to confirm that two "seasons" means the same as two "years." If this is not the case, SUWA comments that areas that are treated should be rested for at least two full years following treatment.

X. Without a Sufficient Monitoring Plan, the EA Violates NEPA.

The EA does not contain a sufficient monitoring plan, and this lack of monitoring violates NEPA's hard look requirement. In fact, BLM addresses monitoring of the treatments in just a few very short paragraphs on pages 70–71 of the EA. BLM states that “[m]onitoring sites established outside of treatment areas *could be* used to compare results on treated vs. untreated areas.” EA at 70 (emphasis added). However, to actually determine the success of its treatments, BLM *must* establish monitoring sites to compare treated vs. untreated areas. The weather during each of the next 15 years will vary, and the ravages of climate change (discussed in more detail below) will very likely create visible impacts to the lands and vegetation in southern Utah by 2024 (the projected end date for the project, assuming treatments begin in 2010). For these reasons, i.e. weather and climate change, it is particularly important to establish monitoring plots in untreated areas and to compare them to monitoring plots in treated areas. Without such a control group, BLM will not be able to understand how effective its treatments are or determine the cause of various treatments' effectiveness.

The EA should also state what other types of monitoring BLM will conduct in addition to nested frequency, including when and how often BLM will employ the different monitoring techniques. *See* EA at 70. BLM must not only conduct monitoring studies on treatments in the Monument, but must apply these techniques to all treatments discussed in the UKC EA. *See* EA at 71. Importantly, the EA must also state that BLM will collect data in the Project Area *before* any treatment occurs.

Comment: The EA's failure to include a more detailed monitoring plan that includes control groups and different types of monitoring studies throughout the Project Area violates NEPA. Similarly, the EA's failure to study and assess the Project Area prior to treatment violates NEPA.

Furthermore, the EA should include a schedule of how frequently BLM will monitor these treated and untreated areas. In addition, BLM should state how many monitoring plots it will establish and in exactly where these plots will be located. Most importantly, BLM should ensure that the monitoring plan it establishes meets the need for quantitatively assessing the success of the treatment for various types of vegetation in various soil types with various erosion rates and slopes, over various seasons. Although the EA notes that it will monitor wildlife annually and conduct trend monitoring every three to five years, it does not discuss the frequency which with it will monitor the various treatments, or the variables it will use in monitoring particular sites, and the quantitative goals it wants to achieve in each treatment area. *See* EA at 70.

Comment: The EA's failure to include a schedule of how frequently BLM will monitor various plots on various treatment types, and the lack of quantitative goals for which it is monitoring violates NEPA.

SUWA understands that BLM's Moab field office conducts monitoring for vegetation treatments. Prior to signing the Decision for the UKC Project, BLM should talk to fuels and NEPA personnel in the Moab field office to learn from their monitoring plans and strategies.

For example, throughout its experience with monitoring, Moab BLM has recently redesigned its monitoring plans “with feedback from the adaptive management cycle in which key changes were made to increase sampling efficiency and statistical power. In short, the number of random sample plots per stratum has been increased, subsampling at each plot decreased, and the plot design shifted to a 3-spoke design. The changes to the monitoring program are in accordance with where the National Monitoring Strategy appears to be moving and with the recommendations the USGS submitted for BLM Emergency Stabilization and Rehabilitation (ES&R) monitoring.” Email from Gabe Bissonette, Fire/Fuels GIS & Monitoring, forwarded to Tiffany Bartz, SUWA, from Katie Juenger, Planning Coordinator (December 15, 2009) (attached as Exhibit J). Learning from Moab’s experience could help BLM to design a better monitoring plan for the UKC EA.

BLM should also take a look at some of the monitoring sections included in vegetation treatment EAs from the Moab field office. *See, e.g.* Columbia Wildland/Urban Interface Hazardous Fuels Treatment (DOI-BLM-UT-G020-2009-0059-EA) at 26–27 (July 2009) (excerpts attached as Exhibit K); Little Baullie Mesa -- Fuels Reduction for Vegetative Restoration and Resource Protection (DOI-BLM-UT-Y020-2009-0002-EA) at 33–34 (April 2009) (excerpts attached as Exhibit L). As shown by these EAs produced by the Moab field office, BLM engages in extensive collaboration with researchers to improve the effectiveness of its treatments. The UKC EA should include similar collaboration with scientists and researchers.

Furthermore, SUWA has been reviewing research and reports by university researchers, USGS, the U.S. Environmental Protection Agency (EPA), climate change experts, and others regarding land management, climate change, soil erosion, and fugitive dust. SUWA requests that BLM involve these agencies, researchers, and experts prior to completing the design of the UKC Project and prior to signing the Decision for the Project. Involvement of these researchers and experts must occur as early in the process as possible, but certainly before the Decision for the EA is signed. Such involvement could, for example, help BLM frame quantifiable objectives and desired outcomes for the Project; analyze the actual costs and benefits of the Project, including costs from erosion and loss of topsoil associated with particular treatments, and the cost of loss of carbon sequestration provided by trees; develop accountable monitoring criteria and protocol for the Project including the establishment of baselines and test plots to compare the effectiveness of different treatments in areas with particular soil types, slopes, vegetation, etc.

By involving these experts early in the process, BLM could better ensure that baselines, controls, random sampling, and objectives (both management objectives and sampling objectives), high quality data, and statistical analysis are established and reviewed in the UKC EA before a Decision is made and implementation occurs, and that adequate scientific review and monitoring occurs throughout the proposed 15-year time span of the UKC Project. Involving these parties would ensure that the UKC Project treatments are designed and conducted in a rigorously scientific manner. *See, e.g.* excerpts from Moab EAs attached as Exhibits K and L. In this way, BLM could learn a

significant amount from this Project that could be applied to other vegetation projects in the future.

Comment: BLM should discuss monitoring plans and strategies with BLM's Moab field office. The EA should include a more extensive monitoring section that resembles the monitoring section provided in the Moab field office's EAs, particularly in regard to research collaboration. BLM should consult and collaborate with researchers and experts in the design of the UKC Project, and prior to signing the Decision.

Involving researchers and experts in the design of the monitoring plan is particularly important with regard to treatments in the Monument because the Monument Plan and Proclamation clearly establish that the Monument's purpose is for scientific research. GSENM Plan iii-iv, 3. For example, the guidance for Adaptive Management Strategies contained in Chapter 3 of the Monument Management Plan prescribes management policies and practices informed by scientific research and monitoring. GSENM Plan 72. Adaptive Management Strategies, including collaborations with non-BLM entities (as directed within the Management Plan), must be employed in vegetation treatments. GSENM Plan 74. Such adaptive strategies and collaborations with scientists are necessary in the face of continuous and changing effects of drought and climate change.

Likewise, the Department of the Interior (DOI) has an Adaptive Management Initiative that BLM must consult prior to signing the Decision for the UKC Project. See <http://www.doi.gov/initiatives/AdaptiveManagement/>. However, it does not appear from the UKC EA that BLM considered the guidance in DOI's Adaptive Management Initiative. To comply with NEPA, BLM must consult with its own Adaptive Management guidelines, both from DOI and the Monument.

Additionally, compliance with both the Monument Management Plan and the Kanab RMP requires ongoing analysis and planning. Monument Plan 68; Kanab PRMP/FEIS at 2-60. Involving a larger scientific community in planning research and dialogue is critical in determining the best strategies for achieving management objectives. Scientists (including from the USGS and regional universities) can provide independent reviews to ensure management strategies conform to current science. Scientists can facilitate feedback, monitor results, and gather new information—key components of the Adaptive Management Strategies set forth in the Management Plans. Monument Plan at 70–74; Kanab PRMP/FEIS at 2-60; Kanab ROD and Approved RMP 43.

Management actions must be made in light of changed conditions and updated information. Moreover, since it is necessary to link broad management objectives with specific actions, it is important to consider the context in which management activities take place, including watershed, ecosystem, and climatic considerations. Continuous information gathering by regional scientists working in conjunction with the BLM will enable appropriate place-based analysis and planning.

Comment: Involving scientists and researchers is particularly important for treatments in the Monument, which was established to protect the resources, for scientific research, and

to ensure that it remained a frontier. BLM must comply with the Adaptive Management Strategies outlined in the Monument Plan and DOI's Adaptive Management Initiative.

In addition, per the Monument Management Plan, BLM must consult with the Monument's Advisory Council before initiating any vegetation treatments in the Monument. Monument Plan at 26, 27. If BLM has consulted with the Advisory Council, SUWA requests a copy of the consultation letter and the names of the members of the Council. If consultation has not occurred, BLM must consult with the Advisory Council before moving forward on the UKC Project. SUWA further requests the names of the members of the Monument Science Team, which is to work in conjunction with the Monument Advisory Council. Monument Plan at 72.

In addition to consulting with the Advisory Council prior to the use of any mechanical vegetation treatments, BLM must not consider chaining to remove pinyon or juniper within the portion of the Project Area that lies within the Monument. According to the Management Plan, Timber Mountain is within the "Outback Zone," where mechanical vegetation treatments are permitted; nevertheless, chaining is not permitted for removing pinyon or juniper, and is only ever permitted within the Monument in limited circumstances, regardless of the zone. Monument Plan at 26.

Again, consultation with independent scientists in addition to the Advisory Council can promote discovery of the best methods for vegetation treatments, taking into account the effects of climate change, the presence of native plants, soil conditions, and particular sensitivity to erosion and susceptibility to invasive species in the UKC Project Area, as well as in treatment areas for other vegetation projects in the future.

Comment: To comply with the Monument Plan, BLM must consult with the Monument's Advisory Council before signing the Decision for the UKC Project.

As discussed in Section II.E, above, a sufficient monitoring plan is particularly important for the UKC Project, which is designed to last 15 years. The 15-year time frame provides BLM ample time to design the Project in stages, and to conduct extensive monitoring *before* BLM progresses to the next stage of treatment. Such a staged monitoring plan would allow BLM to assess the success of various treatments, based on vegetation type, soil type, erosion rates, etc. prior to proceeding with the next stage of treatment. As previously discussed, BLM could break the UKC Project into three separate 5-year stages, and begin work on the latter two stages only after it has a better understanding of what will happen in the treatments based on quantitative data collection and monitoring from the first stage. The EA's current, one-phase approach violates NEPA. BLM is intending to proceed blindly for a decade and a half without understanding the impacts of various treatments.

Comment: To comply with NEPA, the UKC Project should be designed in stages, and intensive monitoring, which enlightens BLM as to the effectiveness of different treatments in different locations on different soil types, should occur before the project progresses to the subsequent stages.

The treatment schedule, as it appears on Map 5 of the EA should be altered in accordance with a revision of the EA's monitoring plan. As discussed in previous sections, the UKC Project should be designed in stages, e.g. three 5-year stages, because a lot could change within the 15-year time span of the Project. Accordingly, the UKC Project should be designed so that the priorities and effect of the Project can be reevaluated every five years. Treatments in latter stages should not occur until monitoring has revealed that earlier treatments have not created unintended impacts to the ecosystems or negative effects on wildlife, vegetation, wilderness values, or other resources.

As explained above, no treatments should occur in areas that the UWC has proposed for wilderness in ARWA. If BLM nevertheless decides to proceed with such treatments, SUWA requests certain changes in the schedule. First, the treatments scheduled for 2018, 2021, 2023 in the area the UWC has identified as the Timber Mountain area of the Monument should not be allowed to proceed without a thorough monitoring evaluation of earlier treatments. SUWA also requests that the area in the far southwestern corner of the Project Area identified by the UWC as the Upper Kanab Creek unit not be treated in 2010 in order to protect the wilderness characteristics of the area while monitoring is conducted on other similar treatments. Likewise, SUWA requests that proposed pinyon-juniper treatment in the western portion of the Monument and the southeastern portion of the Kanab field office that overlaps with the UWC wilderness proposal not be treated until after the completion of the first phase of the Project, i.e. until after 2014. Finally, SUWA requests that the pinyon-juniper treatment proposed for 2011 in the western portion of the Kanab field office portion of the Project Area that overlaps with the UWC wilderness proposal not occur until after the first phase of monitoring in order to protect the wilderness characteristics of the area while monitoring and treatments are being conducted elsewhere.

Comment: To comply with NEPA's hard look requirement, the treatment schedule should be altered to account for monitoring and other potential changes. No treatments should occur in areas scheduled for treatment after 2014 until scientific monitoring is conducted on previously-treated areas. Treatments scheduled before 2014 in areas identified by the UWC as possessing wilderness characteristics should be delayed until extensive monitoring is conducted on the first phase of treatments.

XI. SUWA Commends BLM for Including a Discussion of Many of the Following Issues in its EA, But Submits that BLM's Analysis of Many of the Following Issues Was Insufficient to Comply with NEPA.

NEPA dictates that BLM take a "hard look" at the environmental consequences of a proposed action and the requisite environmental analysis "must be appropriate to the action in question." *Metcalf v. Daley*, 214 F.3d 1135, 1151 (9th Cir. 2000); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989). In order to take the "hard look" required by NEPA, BLM is required to assess impacts and effects to the environment that include: "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, *whether direct, indirect, or cumulative.*" 40 C.F.R. § 1508.8. (emphasis added). Thus, NEPA requires BLM to engage in a high degree of

analysis on the environmental effects of its actions, including the likely effects from the proposed UKC Project, prior to issuing a Decision on its actions. SUWA commends BLM's inclusion of the following issues in the UKC EA, but submits that BLM's analysis did not go far enough, and thus, as it is currently written, the EA violates NEPA's hard look requirement for each of the following issues.

A. Climate Change

Climate change is almost certainly the most environmentally pressing issue of our time. The impacts of climate change are expected impact southern Utah, and the southwestern United States, significantly, raising temperatures between 4 and 10 degrees Fahrenheit and decreasing precipitation by 15-20% within this century, all of which will have drastic impacts on the west's water supply and ecosystems. See Exhibit I; see also U.S. Global Change Resource Program, *Global Climate Change Impacts in the United States: Southwest – Arizona, California, Colorado, Nevada, New Mexico, West Texas, Utah* (June 16, 2009) (attached as Exhibit M). The U.S. Supreme Court recently acknowledged that “[t]he harms associated with climate change are serious and well recognized.” *Mass. v. EPA*, 549 U.S. 497, 521 (2007). The best scientific evidence available shows that climate change is a real and compelling threat to public lands. See, e.g., IPCC, *Climate Change 2001: Working Group II: Impacts, Adaptations, and Vulnerability*, Exec. Summary 1 (November 16, 2007) (excerpts attached as Exhibit N) (finding that “modeling studies continue to show the potential for significant disruption of ecosystems under climate change”); IPCC Fourth Assessment Report (November 2007), available at <http://www.ipcc.ch/> (excerpts attached as Exhibit O).

As stated above, the impacts from climate change are particularly pronounced in Utah and other states throughout the desert Southwest. Government and university studies predict that Utah will get even hotter, water will become even scarcer, native plant and animal life will suffer, and wildfires will become larger and hotter. See, e.g., *Draft Climate Change and Utah: The Scientific Consensus* (July 31, 2007) http://www.met.utah.edu/news/global_warming_2007 (report by University of Utah meteorologists and others showing climate warming in Utah, with more drought conditions expected) (attached as Exhibit P); Exhibit I.

In the EA, BLM acknowledges the profound effects of climate change and cites to studies predicting and documenting these effects. EA at 27. Despite this acknowledgment, BLM avoids analyzing the UKC Project's impact on climate change and the effects of climate change on the resources in the proposed treatment area. The EA simply states that, “[t]he tools necessary to quantify climatic impacts are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined.” See EA at 47. Relying on this statement, the EA fails to analyze how the UKC Project will impact climate change and how the effects of climate change in concert with the proposed treatments will impact the resources in the project area directly, indirectly and cumulatively.

Furthermore, the EA states that “[e]xisting climate prediction models are global in nature; so are not at the appropriate scale to estimate potential impacts of climate change on the project area. . . . The lack of scientific tools designed to predict climate change on

regional or local scales limits the ability to quantify potential future impacts.” EA at 47. To the contrary, in its scoping comments, SUWA provided a study by the U.S. Geological Survey (USGS) on the impacts that climate change is likely to have on the desert southwest in particular. *See* Exhibit I. Studies like this one directly link climate change impacts to the southwestern U.S. and southern Utah. Management activities such as vegetation treatments that disturb soils (or any other use which individually or cumulatively causes significant ground disturbance) will lead to soil erosion, weed proliferation, dust storms and the loss of native plant and animal life. These impacts are worsened in the expected hotter, drier climate conditions. BLM cannot avoid its duty under NEPA to analyze the UKC’s Project’s impacts on climate change and climate change’s impacts on the UKC Project by saying that the available models and tools are not good enough. *See* 40 C.F.R. § 1508.7.

Comment: To comply with NEPA, BLM must analyze impacts of the proposal on natural resources, taking into account climate change effects, as well as the Project’s impact on climate change.

While SUWA commends BLM for noting that rangelands and sagebrush steppe ecosystems are important for carbon sequestration, BLM should also note the importance of pinyon-juniper ecosystems and their soils to act as carbon sinks. *See, e.g.,* Huang, Cho-Ying, *Multiscale Analysis of Tree Cover and Aboveground Carbon Stocks in Pinyon-Juniper Woodlands*, ECOLOGICAL APPLICATIONS, VOL. 19, NO. 3 (2009) (attached as Exhibit Q); Neff, J.C., et al. *Soil Carbon Storage Responses to Expanding Pinyon-Juniper Populations in Southern Utah*, ECOLOGICAL APPLICATIONS (2008) (attached as Exhibit R). BLM should cite to these studies in its cumulative impacts analysis at page 67 of the EA and disclose and consider the role and importance of pinyon-juniper ecosystems, in addition to rangelands and sagebrush steppe ecosystems, in combating climate change. Given that climate change is such a serious concern that will drastically change life in the southwest, everything possible should be done to mitigate its severity, including capturing carbon with healthy pinyon-juniper populations, and reducing the amount of dust generated by limiting management actions that disturb soils.

Comment: New studies show that pinyon-juniper woodlands and soils in southern Utah are potentially important sources of carbon sequestration. Because pinyon-juniper trees can potentially help to combat climate change, the EA should consider these studies and analyze the impacts of reducing pinyon-juniper forests in relation to carbon sequestration and climate change before issuing its Decision for the UKC Project.

Furthermore, the UKC EA states that “*if* global climate change results in a warmer and drier climate, increased particulate matter impacts could occur due to increased wind blown dust from drier and less stable soils.” EA at 48 (emphasis added). While SUWA commends BLM’s recognition of the problem of airborne dust, SUWA notes that the available climate models show that southern Utah’s climate *will* become warmer and drier. *See* Exhibit I. In addition, BLM’s statement fails to account for the significant role that BLM has in increasing the amount of wind blown dust, discussed further in the following section.

Comment: BLM appropriately included descriptions of climate change in the EA, but failed to analyze either the effects of the Project on climate change or the effects of climate change on the Project. To comply with NEPA, BLM must thoroughly analyze the cumulative and other impacts relating to climate change.

B. Air Quality

The proposed vegetation treatment raises serious concerns about air quality in the Project Area, the Kanab Field Office, the Monument, eastern Utah, and the State of Colorado. The EA briefly mentions air quality, but does not sufficiently analyze the effects from the proposed action on local air quality, or on the creation of eolian dust. *See, e.g.*, EA at 20. This failure to more thoroughly analyze the proposed Project's impact to air quality violates the Clean Air Act (CAA), FLPMA, NEPA, and the Kanab RMP.

FLPMA requires the BLM to ensure that the proposed vegetation treatment will comply with all applicable air quality standards, including standards established under the Clean Air Act. *See* 43 U.S.C. § 1712(c)(8) (requiring BLM to “provide for compliance with applicable pollution control laws, including State and Federal air ... pollution standards or implementation plans”). FLPMA extends this requirement to all BLM leases, permits, and other land use authorizations. *See* 43 C.F.R. § 2920.7(b)(3) (requiring that BLM “land use authorizations shall contain terms and conditions which shall ... [r]equire compliance with air ... quality standards established pursuant to applicable Federal or State law”). BLM must comply with FLPMA, and with all applicable air quality standards, including those established under the CAA.

Similarly, the Kanab Approved RMP also requires that BLM comply with Federal, State, and local air quality laws and regulations. Kanab Approved RMP at 47. All “resource management authorizations and actions” – such as a Decision by BLM to approve the proposed action for the UKC Project – must conform to this land use plan direction. 43 C.F.R. § 1610.5-3(a); *see also* 43 U.S.C. § 1732(a) (Secretary “shall manage the public lands ... in accordance with the land use plans”). BLM must comply with the Kanab RMP and with all applicable air quality laws and regulations, including those established under the CAA.

One set of federal air quality standards may be seen in the Clean Air Act's national ambient air quality standards—or NAAQS—for certain pollutants that have a significant effect on public health. *See, e.g.*, 42 U.S.C. §§ 7408, 7409; 40 C.F.R. §§ 50.4 – 50.13. These are the maximum concentration of the regulated pollutants permitted by law. Ozone and PM_{2.5}, among other pollutants, are subject to NAAQS standards.

Both short-term and long-term exposure to particulate matter can lead to increased premature mortality, increased hospital admissions and emergency room visits, visibility impairment, and the development of chronic respiratory disease. *See* 71 Fed. Reg. 2627-28; *see also* Kanab Proposed RMP at 3-7. Particulate matter comes from activities such as vehicles driving on unpaved roads and vehicular emissions. *See, e.g.*, Kanab Proposed RMP at 3-1.

Ozone exposure can lead to adverse health effects in humans ranging from decreased lung function to possible cardiovascular-related mortality and respiratory morbidity. 73 Fed. Reg. at 16,436. Ozone pollution also contributes to plant and ecosystem damage. *Id.* at 16,485-89. It damages trees and other plants thereby affecting landscapes in national parks, among other places. Ground-level ozone is formed from precursor emissions—volatile organic compounds (VOCs) and nitrogen oxides (NO_x)—and its concentrations are affected by temperature, sunlight, wind, and other weather factors. *See* 73 Fed. Reg. at 16,437. These precursor emissions originate from a wide variety of sources, both mobile and stationary. *Id.* ORVs emit these precursors from their tailpipes.

Vegetation treatments, like the UKC Project, that require the use of vehicles and other mechanical devices produce pollution—and pollutants regulated by NAAQS—by driving on unpaved roads in addition to emissions coming from their tailpipes. Not only are air pollutants associated with vehicles on dirt roads harmful to human health, they also destroy vegetation and create haze that mars scenic vistas, such as those that are plentiful in the Monument and Upper Kanab Creek area. BLM has not analyzed whether air pollution from ORVs and other mechanical vehicles involved in proposed treatments for the UKC Project will exceed relevant air quality standards or have adverse impacts on public health or the visual or other resources in the Monument or Upper Kanab Creek area. Before signing the Decision for the Project, BLM must model the projected impacts to air quality from this project and analyze whether the UKC Project will impact the air quality in the area to a degree that would violate NAAQS or any other applicable air quality standard.

Furthermore, as discussed above, NEPA requires BLM to take a hard look at the environmental effects of its actions. For BLM to comply with NEPA's hard look standard, it must thoroughly analyze the proposed Project's impact on air quality, including the creation of eolian dust.

Comment: In order to comply with FLPMA, NEPA, the Kanab RMP, and the Clean Air Act, BLM must collect actual air quality data and/or model the potential air quality impacts (direct, indirect, and cumulative) that would result from the proposed action and the other alternatives.

In addition to air pollution issues related to NAAQS, the BLM must also consider the impacts that motor vehicle travel and mechanical equipment use, both cross country and on designated routes, will have on windborne dust. Eolian dust deposition on the mountains of Colorado leads to early snowmelt. *See* Thomas H. Painter *et al.*, *Impact of Disturbed Desert Soils on Duration of Mountain Snow Cover*, GEOPHYSICAL RESEARCH LETTERS, Vol. 34, L12502 (June 2007) (attached as Exhibit S). In 2005 and 2006, this eolian dust caused the snow cover of the San Juan Mountains to melt eighteen to thirty-five days earlier than it would have otherwise. *Id.* Most of this dust appears to be coming from the Colorado Plateau. *See id.*; J.C. Neff *et al.*, *Increasing Eolian Dust Deposition in the Western United States Linked to Human Activity*, NATURE GEOSCIENCE, Advance Online Publishing (Feb. 24, 2008) (attached as Exhibit T). Motor vehicle travel and other surface-disturbing activities tend to destabilize soils and make them susceptible

to windborne erosion. See Jayne Belnap *et al.*, *Dust in the Low Elevation Lands: What Creates It and What Can We Do About It?*, http://www.crwcd.org/media/uploads/2009_09_18_Belnap_seminar.pdf (presentation given at the Colorado River District's Sep. 18, 2009 seminar) (attached as Exhibit U).

This increased dust from motor vehicle and equipment travel and disturbed surfaces is likely being transported to mountain ranges downwind where it is leading to early snowmelt. This early snowmelt creates a host of problems, including regional climate change and drought. See *id.* The BLM must analyze and disclose how the UKC Project will lead to increased dust production, created by the use of vehicles and other mechanical equipment stirring up dust, as well as from the resulting destabilization of the soils from the loss of vegetation and biological crusts. BLM should then quantify to what extent snow will melt off earlier in downwind mountain ranges. The BLM's management of arid lands in Utah is directly responsible for early snowmelt and regional climate change in the Colorado River Basin. Thus, BLM's actions on the Colorado Plateau are particularly important and BLM should not proceed without thoroughly analyzing the effects its actions will have. Without estimating the contributions of this increased vehicular travel on dirt roads and in treatment areas during proposed treatments, and the resulting destabilized soils, to early snowmelt and airborne dust, BLM will violate NEPA's mandate that it thoroughly analyze environmental impacts.

Comment: To comply with NEPA, BLM must estimate the impact the treatments envisioned in the UKC Project will have on airborne dust and early snowmelt in Colorado and eastern Utah.

C. Invasive Species, Noxious Weeds, and Cheatgrass

SUWA has observed that much of the area proposed for treatment remains largely free of invasive plant species and noxious weeds. Although a few areas have been burned by fire in recent years and have been colonized by cheatgrass in the fires' aftermath, other areas remain in a largely natural condition, with healthy stands of native vegetation consisting of pinyon-juniper, sagebrush, manzanita, ponderosa pine, and other species. See EA at 26. SUWA is concerned that mechanical treatments that involve using motorized vehicles in undisturbed areas will increase the risk that invasive plant species will predominate in the Project Area.

It is undisputed that surface disturbance leads to the spread of invasive plant species such as cheatgrass. See, e.g., U.S. Forest Service, Los Padres National Forest (2009) available at <http://www.fs.fed.us/r5/lospadres/about/resources/botanical/invasive-weeds/> (indicating that invasive plant species are spread by "disturbing native vegetation," which "prepares a seed bed for invader weeds") (attached as Exhibit V); Tu, Mandy, Hurd, Callie, & Randall, John M, *Weed Control Methods Handbook: Tools & Techniques for Use in Natural Areas*, THE NATURE CONSERVANCY at 1.1 (April 2001) (indicating that workers and machines, even when working to remove already-established invasive species, "may severely trample vegetation and disturb soil, providing prime conditions for re-invasion by the same or other invasive species") (attached as Exhibit W). Indeed, in UKC the EA BLM notes that "[u]ndesirable, non-native, annuals such as

cheatgrass (*Bromus tectorum*) occur on the allotments [sic] primarily in the disturbed areas.” EA at 30.

Travel off of designated roads by mechanical equipment may allow for the spread of invasive seeds that attach to trucks, ATVs and other equipment and then fall off and germinate in the disturbed soils areas in the Project Area. SUWA commends BLM’s inclusion of preventative measures to reduce the spread of noxious weeds and cheatgrass, including the requirement, under all alternatives, that “[a]ll equipment used for mechanical treatments would be pressure washed when entering and exiting the project area to reduce outbreaks of noxious weeds.” See EA at 19. Likewise, shoes and clothing should be cleaned and inspected before entering the Project Area, whether during mechanical treatment or hand thinning.

Comment: The EA violates NEPA by failing to sufficiently analyze the possible effects from the proposed Project relating to the spread of cheatgrass, and other noxious weeds. In order to minimize the risk that invasive plant species will intrude into areas where they do not currently predominate, BLM should only treat areas that have been previously disturbed. In addition, BLM must take particular care to not spread invasive species by washing vehicles, shoes, equipment, prior to conducting any treatments.

SUWA urges BLM not to treat areas where only native seed may be used, because, as BLM notes, native seed may have a more difficult time establishing itself, and the likely failure of native seed to take hold could lead to an increased risk of cheatgrass invasion into disturbed sites. See EA at 46, 54. Similarly, BLM should not disturb soils or commence mechanical, herbicidal or any treatment that disturbs soils in areas that do not currently have invasive, non-native species, as soils disturbance will greatly increase the chance for non-natives to move in to the area and become established.

Comment: BLM should not conduct treatments in the Monument, as mechanical treatments in particular risk inviting increased amounts of cheatgrass and other non-native and invasive species into the area.

D. Soils

There remain few areas on Utah’s public lands where soils have not yet been disturbed. Preserving undisturbed soils is crucial for combating the spread of invasive species, preventing erosion, combating climate change, and suppressing dust. See, e.g. Exhibits S, T; see also Reid, Chad R., Goodrich, Sherel, and Bowns, James E., *Cheatgrass and Red Brome: History and Biology of Two Invaders*, USDA Forest Service Proceedings (2008) (attached as Exhibit X).

Undisturbed soils help to prevent erosion by reducing the amount of runoff from heavy rain or snow events, and they provide plants and their roots a good foothold. See, e.g., Belnap, Jayne, et al., *Biological Soil Crusts: Ecology and Management*, U.S. Department of Interior, Bureau of Land Management, Technical Reference 1730-2 (2001) (attached as Exhibit Y). As discussed above, new research also shows the importance of limiting the generation of dust by ensuring that soils remain undisturbed

because dust generated in Utah is carried by winds into Colorado, falls on the mountain snowpack, and accelerates the melting of the snowpack, causing serious consequences for river flow levels and timing of snowmelt. *See, e.g.*, Exhibit S and T; *see also* Eilperin, Juliet, *Dust Storms Escalate, Prompting Environmental Fears*, THE WASHINGTON POST, (Apr. 23, 2009) (attached as Exhibit Z); Streater, Scott, *Climate Change, Water Shortages Conspire to Create 21st Century Dust Bowl*, THE NEW YORK TIMES, (May 14, 2009) (attached as Exhibit AA). The dust on the snowpack absorbs more sunlight than white snow, which is highly reflective, and this contributes to climate change. Exhibit AA.

Comment: The EA violates NEPA by failing to sufficiently analyze the impacts to soils and the creation of eolian dust. BLM should not conduct any treatments in areas where the soil has not previously been disturbed by prior vegetation treatments or other projects or management actions. This is crucial to preventing the spread of invasive species, preventing erosion, and limiting the amount of dust spread into the air, which impacts the rate and timing of Colorado’s (and possibly eastern Utah’s) snowpack melt, and contributes to climate change.

The EA states that “[a]pproximately 3,403 acres (6.6 percent of the project area) of the proposed treatment are . . . more susceptible to erosion and care should be taken to reduce long-term exposure of the soil surface.” EA at 53. Because this portion of the project area is particularly susceptible to erosion, BLM should not conduct any treatments on areas with this soil type. Rather, BLM should confine its treatments to the 52.2% of the treatment area where BLM has determined, through soil type analysis, that the soils are particularly well-suited to treatment. *See* EA at 53.

Comment: BLM should only conduct treatments in the 52.2% of the potential treatment areas where soil analyses have indicated that the soil types (i.e. Soil Units 1104, 1106, 1121, 1181, and 5181) are particularly well-suited to treatment.

E. Biological Crusts

The presence of biological soil crusts on portions of the Project Area, including Timber Mountain, warrants special attention. Biological soil crusts are present on Timber Mountain, the Upper Kanab Creek area and other places in the Project Area. These soils are living organisms, easily damaged, and take hundreds of years to grow back.

SUWA commends BLM’s inclusion of a description of the significant benefits of biological soil crusts in stabilizing soil, fixing nitrogen, and providing nutrients and growth to plants, as well as recognition of the sensitivity of biological soil crusts. *See* EA at 31–32, 53. However, BLM’s statement that “the ecological role of soil crusts in arid and semi-arid environments has been found, in the scientific literature, to be controversial” is unwarranted and misleading. *See* EA at 32. As the Department of the Interior’s own study shows, while some aspects of the role of biological crusts are not well understood, it is clear that biological soil crusts provide stability to the soil and help to reduce the creation of airborne dust. *See, e.g.* Exhibit Y, *Biological Crusts* at 33, 36, 40.

SUWA questions BLM's conclusion that treatment methods considered in the proposed action "would not impact [biological soil crusts] more than may have already occurred as a result of past disturbance activities." See EA at 53. The BLM's own study shows that biological soil crusts are particularly sensitive to repeated and severe disturbance. See Exhibit Y, *Biological Soil Crusts* at 21. In addition, the EA did not quantify the amount of biological soil crust disturbances that might have already occurred and did not quantify the amount of biological soil crusts that would be disturbed under the proposed project. As BLM notes in the UKC EA, mechanical treatments such as "harrows or drills may disturb BSC [biological soil crust] communities." EA at 54. Consequently, SUWA urges BLM not to use mechanical treatments in areas with biological soil crusts.

SUWA similarly urges BLM not to treat areas where only native seed may be used, because, as BLM notes, native seed may have a more difficult time establishing itself and the failure of native seed could put biological soil crusts at risk. See EA at 54. Thus, SUWA advocates for the safest approach that will best protect biological soil crusts, namely to avoid treatments altogether in areas where only native seed can be planted, i.e. the Monument.

Biological soil crusts are also crucial to reducing erosion and the amount of dust emitted into the air, which can have drastic impacts on Colorado's snowpack and the timing of spring runoff. See, e.g., Exhibits T, S, and AA.

Comment: The EA violates NEPA by failing to sufficiently analyze the possible effects from the proposed Project relating to the loss of biological soil crusts, and by failing to disclose the estimated quantity of biological soil that will be lost due to the proposed project. To ensure the preservation of existing biological soil crusts, BLM must not conduct treatments, particularly treatments using mechanical equipment, in areas with biological soils. Even hand treatments have the possibility of damaging biological soil crusts and should be avoided in these areas.

F. Cumulative Impacts

As discussed above, NEPA dictates that BLM take a "hard look" at the environmental consequences of a proposed action and the requisite environmental analysis "must be appropriate to the action in question." *Metcalf v. Daley*, 214 F.3d 1135, 1151 (9th Cir. 2000); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989). In order to take the "hard look" required by NEPA, BLM is required to assess impacts and effects that include: "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, *whether direct, indirect, or cumulative.*" 40 C.F.R. § 1508.8. (emphasis added). The NEPA regulations define "cumulative impact" as:

the impact on the environment which results from the *incremental impact of the action when added to other past, present, and reasonably foreseeable future actions* regardless of what agency (Federal or non-

Federal) or person undertakes such other actions. *Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

40 C.F.R. § 1508.7 (emphasis added).

To satisfy NEPA's hard look requirement, the cumulative impacts assessment must do two things. First, BLM must catalogue the past, present, and reasonably foreseeable projects in the area that might impact the environment. *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809–10 (9th Cir. 1999). Second, BLM must analyze these impacts in light of the proposed action. *Id.* If BLM determines that certain actions are not relevant to the cumulative impacts analysis, it must “demonstrat[e] the scientific basis for this assertion.” *Sierra Club v. Bosworth*, 199 F.Supp.2d 971, 983 (N.D. Ca. 2002). A failure to include a cumulative impact analysis of actions within a larger region will render NEPA analysis insufficient. *See, e.g., Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1078 (9th Cir. 2002) (analysis of root fungus on cedar timber sales was necessary for an entire area).

While BLM appropriately included a cumulative impacts discussion in the EA, the discussion falls short of NEPA's requirement. For example, the EA contains only one short paragraph relating to the cumulative impacts of greenhouse gas emissions and climate change. *See* EA at 67. To comply with NEPA and its requirements that an agency *analyze* cumulative impacts, in addition to direct and indirect impacts, BLM must *analyze* the cumulative impacts of climate change combined with vegetation treatment on individual resources such as wildlife, vegetation, soils, air quality, and other resources. *See* 40 C.F.R. § 1508.7. Under NEPA, BLM must consider what the changing climate and potential for dust storms means with respect to the environmental impacts of the proposed project on 130,000 acres of land in southwestern Utah. *See* 40 C.F.R. § 1508.7.

Furthermore, the EA's cumulative impacts analysis did not include an analysis of reasonably foreseeable vegetation treatment actions on the private lands, State and Institutional Trust Lands (SITLA) lands or U.S. Forest Service lands that are included in the EA's Project Area. *See* EA at 1.

Comment: The cumulative impacts analysis in the EA, particularly in regard to climate change and air quality, is inadequate and does not comply with the requirements of NEPA. Similarly, the cumulative impacts analysis is inadequate because it failed to assess and disclose the potential cumulative impacts from the reasonably foreseeable vegetation treatments on surrounding private, USFS, and SITLA lands in the Project Area.

G. Treatment Impacts to Manzanita, Ponderosa Pine, and Other Distinctive Native Vegetation

There remain some isolated, beautiful stands of ponderosa pine, manzanita, and other distinctive native plant species on Timber Mountain and in other places in the Project Area. These remaining stands of native vegetation warrant the utmost protection.

As BLM knows, these fragile vegetative communities could be easily eliminated entirely or weakened by the spread of invasive species and noxious weeds. *See* EA at 65. Thus, BLM must exercise the utmost caution when conducting treatments in areas near these special, surviving native plant species. As discussed above, it is no secret that invasive species thrive in disturbed soils. *See, e.g.*, Exhibit X (indicating that cheatgrass, perhaps the biggest threat to native plant communities in Utah, invades areas where the soil has been previously disturbed). Vegetation treatments using a harrow, drill, chain, brush hog, or other mechanical equipment create significant soil disturbance, which provides the perfect opportunity for the spread of invasive species. *See, e.g.*, Exhibits V, W, and X.

In order to ensure that invasive species do not gain a foothold in areas with distinctive native vegetation like ponderosa pine and manzanita, BLM must take care to not disturb the soil around such native vegetation. Accordingly, BLM should use only hand thinning around such vegetation, and should reduce only the ladder fuels that could lead to a catastrophic fire impairing these species. *See* EA at 45–46.

Comment: To protect the stands of ponderosa pines, manzanita, and other valued, native vegetation from invasive species, BLM must not disturb the soil around these species and must use only hand thinning to reduce ladder fuels.

H. Species

i. Mexican Spotted Owl

SUWA understands that the Endangered Mexican Spotted Owl (MSO) uses the cliffs on the western edge of the Project Area as nesting habitat.⁴ In violation of NEPA and the Endangered Species Act, the EA entirely fails to mention, much less analyze, the effect of the proposed Project on MSO. BLM must also consult with the U.S. Fish and Wildlife Service (FWS) and disclose this consultation and as well as U.S. FWS' opinion. In order to protect this federally endangered species, BLM should place timing restrictions that limit when treatments can occur to protect nesting, fledgling and foraging owls. Regardless of the time of year, no treatments should occur within a half mile of the cliff edges where MSO reside. For an example of similar restrictions, *see, e.g.*, Bureau of Land Management, December 2008 Lease Sale, Stipulations and Notices List at 39 (requiring the application of conservation measures within a half mile of suitable owl habitat) (attached as Exhibit BB); Bureau of Land Management, August 2008 Final Oil and Gas Lease Sale List, Stipulations at 6 (requiring the application of conservation measures within a half mile of suitable owl habitat) (attached as Exhibit CC).

Comment: In order to protect the Endangered MSO, BLM must consult with the U.S. FWS, and not conduct treatments within a half mile of MSO habitat. In addition, BLM should include timing and other restrictions that are common to all alternatives in order to prevent any disturbance during the owls' nesting, fledgling, and foraging activities. BLM's failure to analyze the impacts of the UKC Project on MSO violates NEPA.

⁴ If this is not correct, please notify SUWA.

ii. Sage Grouse

SUWA understands one of the goals of the UKC Project to be improving sage grouse habitat. Given the dramatic decline of sage grouse, protecting this dwindling species is of paramount importance. Some experts, such as Mark Salvo, with the non-profit group WildEarth Guardians, state that removal of “decadent” sagebrush can actually have a negative impact on sage grouse habitat because this tall, dense sagebrush provides high-quality sage grouse habitat, especially in the cold winter months. Prior to eliminating any “decadent” sagebrush, SUWA requests that BLM first demonstrate that sufficient big sagebrush habitat exists locally for sage grouse and other wildlife for use particularly in the winter months. If no such habitat exists, SUWA requests that BLM not conduct treatments on “decadent” sagebrush.

Comment: Prior to conducting any treatments on “decadent” sagebrush, BLM must analyze and present for public comment its analysis on the sufficiency of local big sagebrush habitat for sage grouse to use for shelter in the winter. If sufficient big sagebrush habitat does not exist, BLM must not eliminate “decadent” sagebrush.

To comply with NEPA’s hard look requirement, BLM must use quantitative data and analysis, and look to existing studies conducted in Utah and other places in the southwest to analyze how vegetation treatments, for both pinyon-juniper and sagebrush ecosystems, have impacted sage grouse in the past, and are likely to impact sage grouse in the proposed UKC treatments.

SUWA questions BLM’s use of the word “generally”⁵ on page 17 of the EA in relation to wildlife. Specifically, the EA states that “[s]agebrush treatments would generally be scheduled to avoid the sage grouse lekking/nesting period within delineated brooding habitat,” but “should a need arise to conduct vegetation treatments during this time, the areas to be treated would first be cleared by a qualified biologist.” See EA at 17. In order to fully protect sage grouse, BLM should change this language to prohibit sagebrush treatments during sage grouse lekking and nesting periods.

Comment: BLM must fully analyze the impacts to sage grouse from the proposed Project and should prohibit treatments during sage grouse lekking and nesting periods, and in lek and nesting areas.

iii. Other Threatened, Endangered, or Sensitive Species

The EA must disclose whether there are other threatened, endangered, or sensitive species (e.g. the Kanab ambersnail) or habitat for such species present in the Project Area. If there are listed species in the Project Area, BLM must consult with the U.S. FWS and disclose this consultation and as well as U.S. FWS’ opinion.

Comment: The EA must disclose other threatened, endangered, and sensitive species in the Project Area, and BLM must consult with the U.S. Fish and Wildlife Service.

⁵ SUWA also takes issue with the EA’s proposal to “generally” not conduct treatments during migratory bird nesting season. See EA at 17. No treatments should be conducted during migratory bird nesting season.

I. Mitigation

The EA includes very little discussion on mitigation. *See, e.g.*, EA at 51. To comply with NEPA, the EA must include a mitigation section that describes possible mitigation measures and assesses whether the measures would effectively mitigate impacts.

Comment: To comply with NEPA, the EA must include a mitigation section that describes possible mitigation measures and assesses whether the measures would effectively mitigate impacts.

CONCLUSION

Thank you for considering SUWA's comments on the UKC Project and for involving SUWA throughout the NEPA process. Please do not hesitate to contact me if you have any questions or concerns. SUWA looks forward to remaining involved in the UKC Project, and to continue working openly with BLM.

Sincerely,

/s/ Tiffany Bartz

Tiffany Bartz
Southwestern Field Attorney
Southern Utah Wilderness Alliance
425 E 100 S
Salt Lake City, UT 84111

Larry Stevens
Senior Ecologist
Grand Canyon Wildlands Council
P.O. Box 1594
Flagstaff, AZ 86002

Bill Hedden
Executive Director
Grand Canyon Trust
2601 N. Fort Valley Rd.
Flagstaff, AZ 86001

Phil Hanceford
Associate Attorney
The Wilderness Society
1660 Wynkoop St. Suite 850
Denver, CO 80202

Jim Catlin
Project Coordinator
Wild Utah Project
68 S. Main St., Suite 400
Salt Lake City, UT 84101

John Carter, PhD
Utah Director
Western Watersheds Project
P.O. Box 280
Mendon, UT 84325