CENTER FOR BIOLOGICAL DIVERSITY

VIA ELECTRONIC MAIL (with exhibits) AND U.S. MAIL (with exhibits)

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Bureau of Land Management
Nevada State Office
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Re: Draft Vegetation Treatments Using Herbicides on BLM Lands in the 17 Western States Programmatic Environmental Impact Statement and Draft BLM Vegetation Treatments on BLM Lands in 17Western States Programmatic Environmental Report

Dear Mr. Amme,

The following comments are submitted in response to two recent draft documents issued by the Bureau of Land Management ("BLM"): the Draft Vegetation Treatments Using Herbicides on BLM Lands in the 17 Western States Programmatic Environmental Impact Statement ("DPEIS"), and the Draft BLM Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report ("DPER"). These comments are submitted on behalf of the Center for Biological Diversity (the "Center"), our staff, and our more than 18,000 members nationwide whose interests, and indeed, whose health, may be adversely affected by the BLM's proposals to treat vegetation with herbicides, mechanical methods, and manual and biological controls. The Center is a non-profit organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center's staff and members regularly recreate in, study, photograph, and enjoy the 262 million acres of BLM land in the seventeen western states that may be impacted by the proposed action. The Center opposes the wholesale chemical spraying and ecological disruption that the proposed action would authorize and urges the BLM to withdraw this ill-conceived proposal.

These comments incorporate by reference the comments submitted by other conservation groups including Public Employees for Environmental Responsibility ("PEER"), the Restore Native Ecosystems Coalition, and the California Oak Foundation.

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I. Introduction.

The Center recognizes that some of the public lands of this country are out of balance and that non-native vegetation and invasive shrubs are changing the landscape of the west in new and 'unnatural' ways. However, the cause of this landscape conversion is largely anthropogenic; from livestock grazing, roads, and fire suppression to global warming, vegetation changes have been inflicted on the land by human mismanagement and misguided policy. Unfortunately, the proposed action – aerial application of herbicides in 17 states on BLM lands – will merely further the degradation of our public lands and continue the trend of imprudent decision-making.

In general, this type of overarching, programmatic analysis can only be useful if there is also site-specific analysis conducted for each and every on-the-ground application. At best, a programmatic EIS can only identify and analyze the likely impacts of such an expansive project by reference to general parameters. This DPEIS does not even meet those general standards because it fails to identify and analyze the causes of the problem it is attempting to solve and it has completely failed to adequately identify and analyze likely impacts of the project, including, but not limited to, impacts to native species, ecosystems, air and water quality, and human health. If the BLM chooses to go forward with this ill-conceived project, the BLM should acknowledge that programmatically approved treatments will not be appropriate on any of the public lands that it is charged with managing and that it must prepare subsequent site-specific EISs for each and every such project.

Recent case law has confirmed that it is arbitrary and capricious for a Federal agency to authorize widespread actions without site-specific and comprehensive analysis of the impacts of those actions. "Just as it would be arbitrary and capricious for a pharmaceutical company to market a drug to the general population without first conducting a clinical trial to verify the drug is safe and effective, it is arbitrary and capricious for the Forest Service to irreversibly 'treat' more and more old growth forest without first determining that such treatment is safe and effective for dependent species." *Ecology Center v. Austin*, 430 F.3d 1057, 1064 (9th Cir. 2005). In this case, the BLM cannot rely on general assessments of the impacts of herbicides provided in the DPEIS without assessing the risks to all the components of the ecosystem in which the site-specific action will take place. Such risks include, but not limited to, potential impacts to rare, threatened and endangered species, and air and water quality. The BLM cannot authorize any herbicide vegetation treatments where the condition of the land and the extent of the resources have not been adequately assessed. An understanding of the ecological and hydrological functions of a specific area and the plant and animal communities that exist there is integral to interpreting how herbicides will affect and be effective on that landscape. Site-specific analysis must be conducted using short- and long-term scenarios before any herbicide treatments can be approved.

The Center also has serious concerns about the definitions of "invasives" and "weeds" as used in the DPEIS and the DPER. It is unclear whether native plant species have been classified as invasives or weeds in areas where they are considered undesirable for certain economic interests such as grazing. Some native species have boom and bust reproductive cycles that replenish the seed bank and play an important role in succession and soil stabilization, but, for

example, are not desirable as forage for livestock. The BLM should not be playing politics with ecology; all proposed treatments should be limited to non-native noxious species.

Unfortunately, before initiating the proposed project the BLM failed to undertake any systematic needs analysis to determine the actual demand for the proposed action. Rather the BLM simply relied on information provided from each state about how many acres of public lands are "infested" and need to be treated. The information had no uniform context, nor was there adequate consideration of alternative solutions besides herbicide spraying.

The Center also questions the economic analysis, or lack thereof, for the proposed action. The DPEIS fails to identify and disclose the costs of the proposed project, both in terms of supplies and labor, and in terms of the potential loss of vital ecosystem services such as clean air, water, and soils. The BLM attempts to let itself off the hook for preparing a comprehensive economic analysis by stating "Concerned individuals should rest assured that more detailed, site-specific analyses would be conducted during the development of actual projects for the use of herbicides." The costs of the proposed action are potentially enormous, the public has a right to know the up-front cash outlays that will be required as well as the potential long-term costs that may be incurred by disrupting or destroying essential ecosystem functions on public lands.

The BLM has set itself an enormous task by proposing a program of this scope encompassing hundreds of millions of acres of public land in 17 western states. Even a preliminary identification and analysis of such impacts requires extensive research. *See, e.g.*, Limans and Miller, Silent Spring Revisited, 2004 (providing a preliminary look at the impacts of pesticides on listed species and exposing the failure of the EPA to protect wildlife and humans from harmful exposures to pesticides). The identification and analysis of the environmental impacts of the proposed project is a huge undertaking not the least of which is the identification and analysis of the impacts of the proposed project on hundreds, if not thousands, of native species. Nonetheless, it is an undertaking that is mandated by NEPA and the ESA. Because the DPEIS prepared by BLM is legally inadequate, the agency cannot properly rely on this document in approving the proposed project.

II. The Proposed Use of Herbicides Would Violate the Endangered Species Act.

The BLM's proposed aerial spaying of herbicides over nearly one million acres of public lands annually would violate the Endangered Species Act ("ESA") because many, if not all, of the 18 herbicides that the BLM proposes to spray over public lands were approved for use by the Environmental Protection Agency ("EPA") in violation the ESA. As courts have found, the EPA has repeatedly granted approval for registration of many pesticides and other toxic chemicals without first consulting with the Fish and Wildlife Service ("FWS") and/or the National Marine Fisheries Service ("NMFS") as to the potential impacts to listed species. *See, e.g., Washington Toxics Coalition v. EPA*, 413 F.3d 1024 (9th Cir. 2005) (affirming the district court's order finding that EPA violated the ESA by failing to consult on the impacts of 54 pesticides before approving them for use and enjoining their use near streams in California, Oregon, and Washington that support listed species of salmon and steelhead until EPA completed the required consultation); *Center for Biological Diversity v. Leavitt*, No. C 02-01580 (N.D. Cal. September 19, 2005) Order Re Cross-Motions for Summary Judgment (finding that

EPA failed to comply with Section 7(a)(2) of the ESA in its registration of 66 pesticides and failed to make the required determinations regarding effects of pesticide registrations on the threatened California red-legged frog).

There is no evidence in the DPEIS or elsewhere in the record that the 18 herbicides that the BLM proposes to use in this project, including the 4 "new" herbicides, were properly approved by EPA in accordance with the ESA. Both active and inactive ingredients in the herbicide mixtures can have adverse impacts throughout the ecosystem. Pursuant to Section 7 of the ESA, the BLM has an independent duty to conserve and protect the threatened and endangered species that depend on the public lands it is charged with managing. Therefore, the BLM cannot ignore EPA's failure to comply with the ESA in this regard and to do so would also violate the ESA.

Moreover, even if some or all of the herbicides that the BLM proposes to utilize in the proposed project were properly approved by the EPA in accordance with the ESA, which the Center does not concede, the BLM has failed to ensure that the proposed project will not jeopardize listed species or destroy or adversely modify critical habitat. Although the BLM has initiated consultation with the FWS and the NMFS, the BLM has failed to provide adequate information regarding the likely impacts to listed species and their habitats necessary to assess the extent of such impacts from the proposed wholesale aerial herbicide spraying. As discussed below in Section III.D., the information provided by the BLM in the Biological Assessment including the Ecological Risk Assessment is wholly inadequate. In order to comply with the ESA (as well as NEPA), the potential impacts that must be identified and analyzed to determine how and to what extent the proposed action may affect listed species or their habitats include, but are not limited to: direct impacts to plants (including seed banks), to wildlife, and to their habitats (including impacts to critical habitat); indirect impacts to listed species and their habitats through contamination of air, water, and soils; direct and indirect impacts to species due to bioaccumulation of these herbicides and/or their breakdown products throughout the ecosystem; direct and indirect synergistic effects from these herbicides, their breakdown products, and/or other chemicals found in the environment; and cumulative impacts to listed species and their habitats from this and other projects that impact air and water quality and soils.

Because the herbicides that the BLM has proposed to use in this project were not approved for registration in accordance with the ESA, and the BLM has independently failed to fulfill its obligations under the ESA, approval of the proposed project will violate the ESA.

III. The DPEIS Fails to Comply with NEPA.

A. The Past and Ongoing Causes of the Spread of Invasive Species Must Be Addressed as Part of the Scope of the Project.

First, and most importantly, the BLM has failed to consider the causes of vegetation conversions in the western landscapes and the causes of catastrophic fire, unhealthy ecosystems, and impaired wildlife habitat. Looking at the causes of the problem along with proposed treatments is critical to restoring the land to long-term health. The lands managed by BLM need long-term preventative management, not just triage. The BLM's misidentification of the proper

scope of the project fundamentally undermines the adequacy of the DPEIS. The BLM cannot separate the ways in which its management practices have allowed and continue to allow non-native plants to flourish and invade large areas of the western landscape from its proposals to "treat" those non-native plants where they have taken hold. This overall flaw in BLM's conception of the proposed project has inevitably led to a DPEIS whose scope and stated purpose and need are far too narrowly conceived. Limiting the scope of the proposed project and the DPEIS to only vegetation treatments using herbicides is both nonsensical and violates NEPA's requirement that an EIS look at the whole of the action including "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity." 42 U.S.C. § 4332(C)(iv).

The BLM's failure to look at preventative strategies in the DPEIS is unsupportable. For example, Wooten and Morrison (1995) recommended that prevention strategies should be stressed over control measures when dealing with non-native invasive species, and that prevention should be prioritized in areas free of invaders, with management activities prioritizing unpolluted flora. They recommend that management objectives on public lands should emphasize environmentally benign biological and mechanical control, and that no management activities should be permitted that may cause further introduction of non-native species. "Further plant invasions caused by vegetation removal and ground disturbance (e.g. roading, logging, and grazing) can be prevented by restricting these activities from intact native ecosystems (e.g. roadless areas and wilderness) where the effects of man are still largely unfelt." The proposed project reviewed in the DPEIS offers none of these preventative measures as vegetation treatments, and it is a major shortfall of the framing of the scope of the project.

The BLM also failed to discuss or determine the benefits of passive restoration, including the removal of livestock and off-highway vehicles from weed infested or otherwise disturbed areas. The DPEIS entirely neglects the effects of livestock on weeds species; and the DPEIS fails to compare alternatives that incorporate passive restoration treatment.

While the DPER does discuss prevention, minimization, and non-chemical treatments, it is entirely unclear how the BLM intended the two documents to relate to each other. For example, the DPER states that when developing treatment objectives, the BLM will first take actions to prevent or minimize the need for vegetation controls and use effective, non-chemical solutions. However, the DPEIS proposes the use of herbicides without including any discussion of prevention and minimization or prioritization of non-chemical solutions.

Because the scope of the project reviewed in the DPEIS is unreasonably narrow, the DPEIS is inadequate.

B. The DPEIS Fails to Adequately Describe the Project and BLM's Failure to Provide Detailed Inventories of the Natural Resources On BLM Lands Violates FLPMA and Undermines the NEPA Process.

The DPEIS fails to adequately describe the lands on where the BLM proposes to undertake aerial spraying of herbicides. Under NEPA, the BLM is required to describe the program and its projected impacts on the environment. 42 U.S.C. § 4332(2)(C). The project

description must be readily understood by the interested public. 40 C.F.R. § 1502.8; *Oregon Environmental Council v. Kunzman,* 817 F.2d 484, 493 (9th Cir. 1987). By failing to clearly identify and describe the lands on which it proposes to apply herbicides, the DPEIS fails to provide the public and decision makers with a clear understanding of the scope of the proposed project.

Inevitably, because the area of the proposed project is not clearly defined, the identification of potential environmental effects is fatally flawed. For example, the DPEIS fails to provide any meaningful information about the rare, threatened, and endangered species and their habitats that may be affected by the proposed project, indeed, even the list of species that may occur in the 17 western states encompassed by the project is incomplete. NEPA demands far more. Moreover, the BLM cannot fulfill its obligations to protect and conserve listed species under the Endangered Species Act ("ESA") without detailed information about the status of those species and their habitats on the public lands that may be impacted by the proposed action.

The Federal Land Policy and Management Act ("FLPMA") requires the BLM to prepare and maintain a current inventory of all public lands and their resources. 43 U.S.C. § 1711(a). The systematic inventory of the public lands and resources managed by BLM is intended to form the basis of the BLM's decision-making in managing those public lands. 43 U.S.C. §§ 1701(a)(2), 1711, 1712. Accordingly, the regulations implementing section 1711, require that BLM collect resource and environmental inventory data and information "in a manner that aids application in the planning process, including subsequent monitoring requirements." 43 C.F.R. § 1610.4-3.

The BLM has consistently failed to undertake meaningful, detailed surveys of BLM managed lands and to provide comprehensive inventories the public resources it is charged with managing. Even in the areas where the BLM has some data, it has failed keep those data current. As a result, the BLM has insufficient, outdated, and inadequate inventory data of many of the resources on public lands in violation of FLPMA. As a result, the BLM's management decisions are not based on a strong foundation of accurate, detailed information regarding these public lands as Congress intended.

Accurate baseline data regarding rare, threatened, and endangered species on BLM managed public lands is also critical to identifying and analyzing the potential impacts of the proposed action under NEPA and the ESA. For example, in many areas of the arid west native plants may not emerge every year but only in years of high rainfall or when temperatures are favorable. The survival of these native plants depends on the survival of dormant seed in the soils. Without detailed, longitudinal surveys, the locations of these native plant seed banks remain unknown to the BLM. Responsible resource management is thus impossible. Without this necessary information, allowing aerial herbicide spraying in areas that may contain native seed banks critical to the survival of native plants is irresponsible.

There is no justification for the BLM's failure to adequately describe the project, identify potential impacts, and address issues critical to the survival of native species. BLM's attempt to sidestep the complex issues raised by the proposed action based on its *lack* of information

regarding native species and the public lands it is charged with managing is both cynical and unsupportable.

C. The DPEIS Fails to Identify and Analyze Impacts from Ongoing Livestock Grazing, Off-road Vehicle Use, and Vegetation Management.

As part of the DPEIS, the BLM must identify other ongoing projects that impact the areas affected by the proposed project. In this instance, the BLM has failed to include many significant ongoing activities that impact the introduction, establishment, and spread of invasive plants in the environmental baseline analysis, the no-action alternative, or in the cumulative impacts analysis.

1. Livestock grazing

One of the fundamental causes of vegetation-type conversion, catastrophic wildfires and non-native weed invasions in the West is livestock grazing. Livestock are grazed on 165 million acres of BLM lands in the seventeen western states, but the DPEIS fails to address livestock as a vector of non-native species, widespread surface disturbance, and impaired watersheds leading to vegetation type-conversion, contributing to the very conditions that this DPEIS seeks to address.

There is sufficient evidence that the presence of livestock grazing increases the risk of catastrophic wildfires. Livestock promote the spread and colonization of alien plants, which can increase fire frequencies (Billings 1990, Billings 1994, Rosentreter 1994, Belsky and Gelbard 2000). Livestock grazing harms native species and promotes alien plant growth (Kimball and Schiffman 2003, Seabloom et al 2003). Cattle were found to strongly prefer native perennial to alien annual grasses, especially in the dry season (Van Dyne and Heady 1965). Livestock management is also a factor in preventing native vegetation from re-establishing and re-colonizing degraded areas: over-utilization of native vegetation can prevent regeneration of native species and the reestablishment of native vegetation in areas now dominated by non-native grasses (Bartolome et al 1980, Bartolome 1987, Stubbendieck et al 1991, Van Dyne and Heady 1965).

Livestock alter vegetation communities by changing the composition and structure of upland forests as well. Livestock grazing reduces the biomass and density of understory grasses which otherwise out-compete conifer seedlings and prevent dense stands, and reduces the abundance of fine fuels, which formerly carried low-intensity fires (Belsky and Blumenthal 1997).

The DPEIS only addresses mechanical and chemical methods for reducing the risk of catastrophic wildfire, but does not offer guidance in the proactive prevention of fires and the long-term recovery of burned lands. Allowing livestock grazing to continue in recently burned areas compromises the ability of post-fire areas to recover; post-fire livestock grazing can delay recovery of burned areas, and should not be permitted in burned areas until vegetation recovery has occurred (Beschta et al. 2004). Monitoring in post-fire areas should determine whether livestock will adversely impact recovery of vegetation and soil resources, since some vegetation communities may not reach their compositional peak until the second or third year (Guo 2001).

The DPEIS should also analyze an alternative that mandates the use of weed- and seed-free livestock feed and supplements on public lands. All livestock should be certified weed- and seed-free before being turned out on the public lands. This simple preventative measure would reduce the potential for future invasive colonization and spread by non-native species.

The impacts of livestock on our public lands are not limited to general vegetation effects- the specific impacts to particular ecosystems is also well known. The DPEIS addresses the impacts of the alternatives on these areas, but fails to enumerate the disturbance and vegetation conversion caused by livestock in these areas.

Riparian areas are especially sensitive to livestock-related disturbance and are also ripe for non-native species colonization. However, myriad native species depend on this habitat, and the conflicts with livestock use are well known. In a review of more than 120 scientific studies on the effects of livestock grazing in riparian areas, documented impacts included:

- Reduced herbaceous cover, biomass, productivity and native species diversity;
- Reduced diversity and abundance of native reptiles and amphibians;
- Wider stream channels, less stable banks, higher peak water flows;
- Reduced soil fertility, water infiltration and resistance to erosion;
- Higher water temperature and lower dissolved oxygen;
- Reduced tree and shrub cover and biomass;
- Shift from cold-water fish and aquatic invertebrates to warm-water species;
- Higher water loads of sediments, nutrients, and pathogens;
- Lower water tables; and
- Shift from riparian bird species to upland-generalist species (Belsky et al. 1999).

The summary report stated that an "…extensive literature search did not locate peer-reviewed empirical papers reporting a positive impact of cattle on riparian areas" (Ibid). There is not a single grazing management approach that has produced consistent improvements of degraded riparian-wetland areas (Ohmart 1996).

Trampling and loss of stabilizing vegetation due to grazing in riparian areas results in higher peak water flows, channel scouring, erosion and down-cutting, which in turn lowers water tables, ends permanent stream flows and dries out watersheds (Kovalchik and Elmore 1992, USBLM 1994, Trimble and Mendel 1995, Belsky et al. 1999).

Upland impacts due to livestock grazing include erosion caused and accelerated by the reduction of plant cover, the destruction of microbiotic crusts, and the compaction of soil and the diminished infiltration. (Beymer and Klopatek 1992, Brotherson, et al. 1983, Brotherson and Rushforth 1983, Sharp et al 1964, Belsky et al 1999, Jones 2000) This effect is greater during the rainy season (Smiens 1975). Eroding soil and manure ends up in streams as excessive sediment and nutrient loading and pathogen contamination. Various grazing management strategies have not been found to reduce such watershed degradation (Gifford and Hawkins 1976, Blackburn et al. 1982).

Biological (cryptobiotic, cryptogamic) soil crusts are important elements of arid and semi-arid ecosystems. These crusts contribute to increased organic matter, increased minerals, increased soil stability, reduced water run-off, enhanced germination and seedling establishment of native plants, decreased germination of some alien plant species, and increased survivorship of native vascular species. (Belnap 1994a,b, Belnap and Gardner 1993, Belnap et al. 1994, Beymer and Klopatek 1992, Brotherson et al. 1983, Harper and Marble 1988, Harper and Pendleton 1993, St. Clair and Johansen 1993, Webb and Wilshire 1983, Belnap et al. 2001). Biological soil crusts provide little fuel to carry fire and may act as refugia, slowing fire, decreasing its intensity, and contributing to the mosaic pattern of vegetation (Belnap et al. 2001).

Livestock negatively impact biological crusts through trampling and compaction, especially during dry seasons (Anderson et al. 1982, Belnap and Gardner 1993, Beymer and Klopatek 1992, Harper and Marble 1990, St. Clair and Johansen 1993, Belnap et al. 2001). Both cover and biomass of the biological soil crust has been found to be reduced on areas grazed by domestic livestock and exposed soil to increase (Beymer and Klopatek 1992, Brotherson et al. 1983). Significant correlations can exist between biological soil crust cover and the composition of vascular plant communities, so that damage can result in an altered vascular flora (Beymer and Klopatek 1992, Brotherson et al. 1983). Grazing can reduce nitrogen fixation by as much as 95% (Belnap et al. 2001).

Recovery rates after damage have been found to often be very slow, possibly centuries for some components (e.g., lichens, mosses) (Belnap 1994b, Belnap et al. 2001). Invasive alien plants generally decrease biological crust cover and species richness (Belnap et al. 2001).

All of these impacts of livestock grazing can contribute to the establishment and colonization of non-native species, but the DPEIS fails to address these causative factors and instead retains its focus on herbicide treatments alone. The BLM should reduce the spread of invasive weeds by livestock grazing by retiring permits in infested areas, suspending livestock grazing in areas of high disturbance and in ecologically-susceptible areas (riparian corridors, post-fire, wet meadows, disrupted biological crusts), and avoiding grazing in areas with intact native vegetation communities. One of the most comprehensive treatments available to the BLM is to limit livestock grazing in our public lands, improving the aesthetic and ecological landscape for all public lands users and diminishing the need to use chemical and biological controls.

2. Off-highway vehicle use

Off-highway vehicle ("OHV") use is a widespread and potentially harmful land use that the BLM failed to consider in the DPEIS. Preventing further colonization and invasions of non-native plant species can be partially attained through strict management of this type of recreation, and yet the DPEIS fails to address this type of preventative and proactive "treatment" in its analysis.

OHVs can spread invasive species over a large area. By suppressing native vegetation, creating soil disturbance, and dispersing nonnative plant seeds, OHVs represent a significant vector of invasive plants (Lawler, 2000, Lovich and Bainbridge, 1999, Tyser and Worley, 1992). It has been estimated that a single pass of an OHV can spread more that 2000 invasive knapweed

seeds over a 10 mile radius (Montana State University Extension Service 1992). Roadless areas represent refugia for native plant species, and limiting the access of OHVs into roadless areas will prevent the further degradation of native plant communities (Gelbard and Harrison 2003).

3. Other Vegetation treatments

Some ongoing vegetation treatments are detailed in the Draft Programmatic Environmental Report ("DPER"). However, first, it is entirely unclear how the BLM intends the DPER to be used and why these treatments were not evaluated along with the other herbicide treatments in the context of a consolidated EIS. The NEPA process and the circulation of draft documents are intended to *inform* the public and decision makers. Unfortunately, the process undertaken by the BLM here, issuing a DPER at the same time as a DPEIS, has done the opposite; it has confused the issue and muddied the analysis.[1] The public has not been adequately informed of the purpose of the DPER or how it relates to the DPEIS. In order to fulfill its mandates under NEPA, the BLM must thoroughly explain its objectives for producing this document, how it relates to the DPEIS, and provide the public adequate time to review and comment on the documents once those explanations are provided.

The DPER uses the term wildlife urban interface ("WUI") to refer specifically to the areas where open lands meet urban development, especially houses. This generally considered an area within 20 to 60 meters of houses where a defensible zone can be created. Fences, powerlines, trails, roads, and properties without buildings do not constitute WUI areas (Nowicki, 2001). The BLM has never prepared a comprehensive study of how many acres of WUI there are on BLM lands, how many of these acres are forested, and how many of these acres need to be treated for invasive species.

The DPER states that 3.5 million acres would be treated primarily for hazardous fuels reduction and to control fires in the WUI. This is more than half of the total vegetation treatment area identified in the DPER and DPEIS of 6 million acres annually. Because there is no meaningful identification or analysis of the impacts of the project on WUI areas, site-specific NEPA analysis of any such projects must be undertaken when those site-specific projects are proposed. The BLM cannot rely on this DPEIS or DPER to truncate future NEPA analysis or to categorically exclude any of these actions from subsequent site-specific analysis.

Comprehensive, site-specific analysis should be provided for all vegetation treatments. The manual treatments outlined in the DPER include chaining, tilling, drill seeding, mowing, roller chopping, blading, grubbing, and feller-bunching. The DPER admits that these methods are not effective for noxious weed control, and instead need to be used as a follow-up to herbicide treatments. There is no analysis or discussion of how many acres will be subjected to these subsequent treatments, which exacerbates the disturbance to which these lands and the species that depend on them are subjected.

[1] PERs are rarely used in public planning documents, and it has a less comprehensive analysis than an EIS would require. A brief internet search on Google for "Programmatic Environmental Report" and "BLM" without the words vegetation and treatment reveals only six web resources, two of which are online glossaries and they others relate to one other BLM project in Moab, Utah (Anderson, personal observation, 2005).

The Center supports some vegetation treatments within the true WUI and federal agencies working to reduce the risks of catastrophic wildfires in areas where the human population will be unduly affected. However, the definition of WUI must be made clear and the parameters outlined. Not every human settlement constitutes WUI territory, and the lack of maps, acreage estimates, and priority areas included in the analysis renders it inadequate.

Moreover, the Center questions the effectiveness of use of herbicides to control fire. Herbicides may have the effect of killing standing vegetation, leaving brushy and highly flammable dead vegetative tissue in its place—which may not actually reduce fire danger at all. The analysis of the herbicide treatments also fails to address potentially caustic reactions when the chemicals are burned, through natural or artificially ignited fires, and fails to analyze how application of herbicides increases or decreases the flammability of the undesirable vegetation. Without identifying and answering these questions it is impossible for the BLM to explain how its proposed action will mitigate the hazard of catastrophic wildfire.

Because this DPEIS is wholly inadequate, the BLM may not lawfully rely on it in approving site-specific actions. For the BLM to proceed with site-specific projects based solely on this DPEIS or DPER that fail to identify and analyze even the most basic environmental impacts of the project would undermine both the letter and spirit of NEPA and undermine public participation and oversight in the management of our public lands.

D. The DPEIS Fails to Adequately Identify and Analyze Impacts to Native Plant and Animals Species

1. The DPEIS fails to use high-quality data.

Council on Environmental Quality regulations recognize that intelligent decision-making can only result from high-quality information. Information included in NEPA documents "must be of high quality. Accurate scientific analysis ... [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Where an agency has outdated, insufficient, or no information on potential impacts, it must develop the information as part of the NEPA process. 40 C.F.R. § 1502.22. In addition, agencies must insure the scientific integrity of the analyses in EISs:

> "Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analysis in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement." 40 C.F.R. § 1502.24.

This DPEIS and the DPER completely fail to analyze the effects of eight herbicides proposed for continued use by the BLM: clopyralid, dicamba, glyphosate, hexazinone, imazapyr, metsulfuron methyl, picloram, and triclopyr. The BLM justifies its omission of analyses for these chemicals by noting that "these herbicides have been evaluated in a previous BLM EIS (USDI BLM 1991), as well as more recently in an invasive plant EIS prepared by the U.S. Department of Agriculture Forest Service (Forest Service; USDA Forest Service 2004)."

Appendix C DEIS Ecological Risk Assessment at p. C-1. Thus, the DPEIS and DPER defer to previous analyses for nearly half the 18 herbicides proposed for use in the preferred alternative.

Unfortunately, however, the previous analyses are either insufficient because they are outdated, or they do not analyze all of the herbicides proposed for use in this action. One of the previous analyses was the BLM's evaluation of herbicides from 1991. Relying on an outdated EIS from 1991 – by now nearly 15 years old – is a violation of NEPA's requirements to insure the use of high-quality, accurate, and updated scientific data. 40 C.F.R. § 1502.22. Hundreds, if not thousands, of new studies have been published over the past 15 years regarding the effects of numerous herbicides, including those proposed for use in this action, on a variety of variables. Analyses from the BLM's previous EIS do not replace the need for new analyses in this DPEIS due to the outdated nature of the 1991 document.

The DPEIS and DPER also rely on analyses from the Forest Service's 2004 EIS for its Invasive Plant Program. The 2004 document is the draft EIS for the Forest Service's Invasive Plants Program, which is currently unavailable online. However, the final EIS is available, and the proposed action's Standard #16 did not include the use of dicamba and 2,4-D in its "toolbox." [USDA Forest Service. 2005. Pacific Northwest Region Invasive Plant Program, Preventing and Managing Invasive Plants Final Environmental Impact Statement. Table 2-2 Action Alternative Standards at p. 2-20: *see* http://www.fs.fed.us/r6/invasiveplant-eis/FEIS/FEIS-0405-no-maps.pdf]. The U.S. Fish and Wildlife Service's Biological Opinion for the Invasive Plant Program pointed out that the Forest Service "reduced potential risks to listed species *by removing dicamba and 2,4-D from the list of approved herbicides…*" BO at p. 16; emphasis added. Thus, the Forest Service and U.S. Fish and Wildlife Service concluded that these two herbicides would not be used due to their adverse impacts on species. Moreover, the Forest Service did not analyze the use of hexazinone at all in its EIS.

Finally, the deferral of analyses of impacts to a previous environmental impact statement for an entirely different project is highly suspect. The Forest Service was proposing to treat 8,989 acres per year out of 24.9 million acres on National Forest System land (USDA Forest Service 2005 at p. 240) whereas the BLM's preferred alternative would treat an astounding 932,000 acres annually. The BLM's analysis of impacts is not analogous to the Forest Service's analyses, as the Forest Service concluded that the small number of acres to be treated with herbicide per year "represents a negligible risk to wildlife on a regional scale." While we disagree with the Forest Service's conclusion that the treatment of nearly 9,000 acres per year would not have serious adverse environmental impacts, particularly on endangered species and rare or restricted plant communities, even if those conclusions were supportable, the fact remains that the analyses and conclusions from the Forest Service's EIS is simply not comparable the BLM's vastly larger proposal.

In sum, the BLM's DPEIS and DPER fail to include any analyses whatsoever about the effects of hexazinone on the biota of the nearly 1 million acres proposed for treatment annually, and it does not disclose that it relied on analyses and conclusions from a previous, much-smaller Forest Service program that did not include the use of dicamba or 2,4-D. The BLM must not rely on the Forest Service's 2004 EIS for its analyses of these three chemicals, nor can it rely on its previous 15-year old analysis. The lack of examination of these three chemicals as well as the

other five chemicals that remain wholly unexamined in these documents due to the BLM's reliance on outdated and non-comparable data, renders the DPEIS inadequate.

If the BLM insists on moving forward with this ill-conceived project, it must first undertake detailed analysis of each of the herbicides it is proposing to use and their potential impacts on the environment based on reliable, current, high-quality data. Given that the impacts to native plants and animals, including rare, threatened, and endangered species, have not been widely studied and are largely unknown, this task will require the BLM to do more than simply rely on previously prepared NEPA documents. Because the proposed action may irreparably harm native species and ecosystems, the BLM cannot go blindly forward – NEPA analysis must provide sufficient information and detail for a reasoned decision-making process. Without first identifying and disclosing to the public the potential adverse impacts of the proposed project on public lands and the native ecosystems that those lands support, the BLM cannot approve this project.

2. Failure to adequately analyze impacts to rare, sensitive, threatened, and endangered species.

The BLM fails to adequately analyze the impacts even of the 10 herbicides that it chose to examine: bromacil, chlorsulfuron, diflufenzopyr (with dicamba), diquat, diuron, fluridone, imazapic, sulfometuron methyl, and tebuthiuron. The Ecological Risk Assessment portion of the Biological Assessment fails to fully and adequately consider cumulative acute and chronic and synergistic ecological effects of these herbicides on biota, and present its results in a clear, concise, accessible format as required by NEPA. 40 C.F.R. § 1502.1.

NEPA requires that the discussion of potential significant impacts include analyses of cumulative impacts. 40 C.F.R. § 1508.7; 1508.25. Cumulative impacts are defined 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.

"[T]he general rule under NEPA is that, in assessing cumulative effects, the Environmental Impact Statement must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment." *Lands Council v. U.S.F.S.*, 395 F.3d 1019, 1028 (9th Cir. 2004). The analyses must discuss in detail how prior activities from different projects have affected the environment. Unfortunately, the BLM's analysis has failed on all counts.

The methodology used for this Ecological Risk Assessment ("ERA") was to develop a "Toxicity Reference Value" using both U.S. EPA toxicity studies and current literature. Typically, surrogate species had to be used for analyses of effects on rare, threatened, or endangered ("RTE") species due to lack of available studies. The ERA addressed RTE animal species using the same toxicity endpoint for other non-RTE species, but the acute Level of

Concern was lowered. While this approach may make sense for assessing the potential impacts on individual animals in some instances, it does not adequately and fully express the risks of the proposed action to populations of at-risk species or provide meaningful information regarding direct, indirect or cumulative impacts on those populations and their habitats. The ERA fails to include any information on overall populations of special-status species in the project area; the status of specific populations in different locations and habitat types within the project area; how many of these specific populations would be exposed to herbicide treatment; and how often these populations would be exposed.

The DPEIS and DPER fail to include detailed information on the amounts of herbicides that have been used in the project area in the past, as well as the past and current amounts of herbicides that are used by other agencies and on private lands within the project area. These types of data are critical for any meaningful cumulative effects analysis. Rather than deferring cumulative impacts analyses on specific populations to the site-specific level, these are exactly the type of analyses that are appropriate and necessary in a programmatic EIS, particularly with the proposed wide-spread application and aerial spraying. Unfortunately, the documents offer no comprehensive analysis of any of the cumulative effects of the proposed action on the plants and animals of the project area.

Moreover, we could find no disclosure of the literature used to formulate the Toxicity Reference Values in the ERA. This information is important for the public to be able to determine whether any key studies were omitted. For example, a recent important study by Reylea (2005) found that two of the herbicides proposed for use by the BLM (carbaryl and glyphosate) applied at the manufacturer's maximum recommended rates resulted in dramatically reduced populations of amphibians and significantly decreased species richness. These effects would be compounded by repeated applications. For example, under the proposed plan the BLM might utilize repeated treatments to control invasive species in areas where the root cause of the invasives (i.e., roads, off-road vehicles, livestock grazing) is not eradicated. Reylea (2005) notes that "when toxicity studies are embedded in the nexus of interactions that compose natural food webs, we can arrive at very different interpretations due to the prevalence of both direct and indirect effects." Reylea 2005 at p. 626.

Chemicals also can have complex effects on wildlife: even sublethal doses can result in adverse impacts on immune function and reproductive rates, and can increase stress on individuals. The ERA provided no such detailed information on these sublethal but potentially significant impacts on populations of wildlife, which is particularly troubling in the case of rare, threatened, and endangered species.

Finally, the DPEIS does not adequately discuss the potential negative impacts of exposure to herbicide combinations in terms of additive or synergistic effects. While the Ecological Risk Assessment made an attempt to qualitatively describe the potential impacts, it admits that essentially no scientific information exists about the ecological effects of mixing different herbicides. ERA at p. 2-11 and 2-12. Furthermore, the qualitative assessment is based on the previous 15-year old 1991 EIS, the Forest Service EIS (which does not cover all the herbicides, as described above), and U, S. EPA risk conclusions from registration which fail to

evaluate sub-lethal effects such as endocrine and developmental alterations. *See* Litmans and Miller, 2004 at p. 4.

Widespread aerial herbicide application by the BLM with little understanding of the extremely serious potential direct, indirect, cumulative, and additive/synergistic effects it may cause would be irresponsible and violate both NEPA and the ESA.

C. The DPEIS Fails to Provide A Comprehensive Monitoring Strategy.

The DPEIS fails to outline any comprehensive monitoring strategy for determining the impacts of the proposed action. Monitoring is an integral part of determining the impacts of an activity on a resource. Objective, quantifiable monitoring is essential for effective management (Christensen et al. 1996). Monitoring must be done frequently and properly, and in the absence of consistent monitoring, management activities should not be permitted. If the BLM goes forward with the proposed project on any basis, monitoring must be conducted before, during, and after herbicide treatments. Resources including soils, plant communities, rare, threatened and endangered species, water quality, and management compliance should all be regularly and consistently checked by the BLM. All results should be publicly available, and reports summarizing those results should be prepared.

Because the DPEIS fails to comply with NEPA, the BLM cannot rely on it to approve the proposed project.

IV. Conclusion.

Without addressing preventative measures for dealing with vegetation changes on the BLM lands, the BLM is fighting an uphill battle. These vegetation changes will continue, increase, and be exacerbated by ongoing deleterious land uses. The Center urges the BLM not to dismiss the numerous citizen comments that urge the agency to work proactively instead of focusing on aerial spraying of thousands of acres with toxic chemicals.

The DPEIS is legally inadequate because it fails to identify or analyze many adverse impacts of the proposed action including, but not limited to, impacts to native species protected under the Endangered Species Act and state laws. Because the proposed project is ill-conceived, inadequately analyzed under NEPA, and may cause irreparable harm to native species in violation of the ESA, BLM should not move forward with this proposal.

Thank you for your consideration of these comments. **Please send all future notices, documents, and correspondence regarding this matter to my attention at Center for Biological Diversity, 1095 Market Street, Suite 511, San Francisco, CA 94103.**

Sincerely,
/s/

Lisa Belenky
Staff Attorney

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