



Bureau of Land Management
Vegetation Treatments EIS Team
P.O. Box 2965
Portland, OR 97218

Re: Vegetation Treatments Using Herbicides on BLM Lands in Oregon: Comments on Draft Environmental Impact Statement

The Northwest Environmental Defense Center (NEDC) and the Oregon Natural Desert Association (ONDA) submit the following comments on the proposal by the Oregon State Office of the Bureau of Land Management (BLM) to increase the number of herbicides available for use on BLM lands in Oregon, and to expand herbicide use beyond the noxious weed management program. Draft Environmental Impact Statement Summary: Vegetation Treatments Using Herbicides on BLM Lands in Oregon (DEIS). The proposed alternatives, directed at the eradication of noxious weeds and other invasive species, pose a significant threat to human and wildlife populations and could cause greater environmental harm than those posed by noxious weeds and invasive species on BLM land. BLM must fully analyze the environmental impact of the proposed alternative and must engage in a comprehensive review of all available alternatives including toxic-free alternatives and the prospects of lessening or eliminating herbicide use altogether.

NEDC is a non-profit, public interest organization dedicated to preserving, protecting, and improving the natural environment in the Pacific Northwest. NEDC is based in Portland, Oregon, and has been working since 1969 to protect the environment and natural resources of the Pacific Northwest by providing legal support to individuals and grassroots organizations with environmental concerns and engaging in litigation independently or in conjunction with other environmental groups. NEDC and its members participate in education, public outreach, and commenting upon proposed agency actions. The members of NEDC recreate in Oregon's BLM land and derive educational, scientific, aesthetic, recreational, spiritual and other benefits from the protection of BLM land and its biodiversity.

ONDA is a non-profit public interest organization dedicated to preserving and protecting the public lands of eastern Oregon. ONDA has a long history of interest and involvement in eastern Oregon's public land management. ONDA's mission is to protect, defend, and restore forever the health of Oregon's native deserts. The over 1,350 members and staff of ONDA use and enjoy the public lands, waters, and natural resources of eastern Oregon for recreational, scientific, spiritual, educational, aesthetic, and other purposes. ONDA and its members also participate in information gathering and dissemination, education and public outreach,

commenting upon proposed agency actions, and other activities relating to the federal government's management and administration of the public lands and federally-protected areas in eastern Oregon.

National Environmental Policy Act

NEPA declares a national policy “to enrich the understanding of the ecological systems and natural resources important to the Nation,” 42 U.S.C. § 4321, and makes it the “continuing responsibility” of all federal agencies to “preserve important historic, cultural, and natural aspects of our national heritage.” 42 U.S.C. § 4331(b)(4). To carry out these goals, NEPA provides that, for all “major Federal actions significantly affecting the quality of the human environment,” federal agencies shall prepare a detailed statement, called an Environmental Impact Statement (“EIS”), that addresses both the “environmental impact of the proposed action,” and reasonable alternatives to that action. 42 U.S.C. § 4332. NEPA requires that the agency take a “hard look” at the problem facing the agency and at all reasonable alternatives including an alternative of no action. *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372 (9th Cir. 1998). Through NEPA, the Council on Environmental Quality (CEQ) promulgated regulations requiring agencies to “[r]igorously explore and objectively evaluate all reasonable alternatives” and “devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.” 40 C.F.R. §1502.14 (a)-(b). Additionally, an EIS must “[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives.” 40 C.F.R. §1502.14 (f). The Ninth Circuit has held that an EIS is adequate only when “its form, content, and preparation substantially (1) provide decision-makers with an environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project in the light of its environmental consequences, and (2) make available to the public, information of the proposed project's environmental impact and encourage public participation in the development of that information.” [*Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 \(9th Cir. 1974\)](#).

Discussion

I. BLM has not adequately considered alternatives to increased herbicide use.

The DEIS neglects to consider non-toxic alternatives to herbicides. Instead of assessing how these alternative methods could be utilized in place of or in coordination with herbicide application, BLM summarily dismisses them. Because these effective and safer practices are not considered in detail, BLM should not expand its herbicide use until it has completed a detailed analysis of non-toxic alternatives as required by NEPA.

The U.S. District Court for the District of Oregon found an herbicide application plan prepared by the U.S. Forest Service Environmental Impact Statement (“EIS”) to be inadequate because the EIS “did not rigorously explore or objectively evaluate the proposed herbicide program and the alternatives to it.” *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F.Supp. 908, 935 (D. Or. 1977). Specifically, the court held that the Forest Service failed to adequately assess the effects of phenoxy herbicides on human and animal health including the potential

impacts the herbicide application might have on nearby agricultural crops and for failing to adequately consider alternatives to the use of phenoxy herbicides. *Id.* at 908. The court found the Forest Service’s discussion of alternatives to herbicide application to “consist[s] essentially of one generality after another.” *Id.* at 934. The opinion noted that “the failure to explore and evaluate in greater detail the alternatives to the use of phenoxy herbicides ... foreclosed the opportunity to “balance the net benefits of phenoxy herbicides versus other methods of vegetation control.” *Id.* at 935. BLM acknowledges that a 1984 injunction prohibiting the agency from using herbicide stemmed from a court decision, *Northwest Coalition for Alternatives to Pesticides v. Block* (Civ. No. 82-6273-E) (1984), holding “that that the BLM had not adequately considered, at a statewide level, the cumulative human health effects for herbicides at that time.” DEIS, 1-2. Likewise, in the present DEIS, BLM provides data for herbicide alternatives, but *no data whatsoever* for non-toxic alternatives to herbicide use. BLM must give non-toxic alternatives a “hard look” as required by NEPA.

Non-toxic alternatives to herbicides can be used in collaboration with currently approved herbicides in order to mitigate the harsh impact on the environment that is characteristic of herbicide use. Several methods have been proven to produce positive results in stopping noxious weeds and other invasive species. For example, manual removal, as well as the use of tools and other machines, has fewer unforeseen impacts than toxic herbicide application. <http://www.beyondpesticides.org/alternatives/factsheets/Least%20toxic%20control%20of%20weeds.pdf>, *Least-Toxic Control of Weeds*, Beyond Pesticides (last visited Nov. 20, 2009). Other natural applications, such as the use of goats to simply eat the targeted invasive plants, can be an effective means of weed control. *Id.* (Goats have been used for “roadside management along railroad tracks, parks, [and] forests.”). Finally, other less toxic ‘herbicides’ such as vinegar, which has stopped invasion of broadleaf, common chickweed, and ground ivy, are available, but have not been considered by BLM. <http://www.pesticide.org/pubs/alts/weeds/vinegarinherbicides.html>, *Vinegar in Herbicides*, Beyond Pesticides (last visited Nov. 22, 2009).

BLM must also evaluate alternatives that would involve changes in management practices on activities on public lands that exacerbate the introduction and spread of noxious weeds and invasive species. Specifically, BLM must evaluate reducing livestock grazing and restriction of off-highway vehicles (OHVs) to designated routes as alternatives to control undesirable plant infestations. The number one land use impacting BLM’s ability to recover lands in Oregon’s high desert permanently—so that inevitable weed invasions are not simply temporarily delayed—is livestock grazing. See, e.g., Belsky & Gelbard (2000) (and citations therein); Parker *et al.* (2006). Livestock grazing is a major factor in the establishment and spread of invasive species on the public lands. The use of herbicides to try to control weeds without prevention is a flawed strategy: if management is not altered, the original problems will return. Accordingly, as an alternative to the use of additional herbicides, BLM must evaluate whether reduction or elimination of livestock grazing would achieve the desired weed control without the use of new herbicides.

Similarly, OHVs spread noxious weeds by creating not only a transportation vector but also by cutting deep ruts in which invasive seeds can become more readily established. BLM must evaluate whether the elimination of cross-country OHV travel and significant limitation of

designated routes for OHV travel would achieve the desired weed control without use of new herbicides. Because the BLM does not adequately explore other readily available, proven and effective alternatives to herbicide use in detail, the DEIS is inadequate and does not comply with the mandates of NEPA.

II. The BLM's preferred alternative may harm vital aspects of the forest, including water ways, critical wildlife habitats, migratory bird populations, and humans.

The increase in application and addition of new herbicides, as outlined in the three favored alternatives of BLM's DEIS, pose significant risks to the environment. In particular, the preferred alternative increases the risk of contamination of Oregon's waters, further threaten already imperiled species, and may endanger the health of local residence and those who use the public lands.

Even though BLM's national office has approved eighteen new herbicides for a "full range of non-commodity vegetation treatments," it is of the utmost importance to use them with caution. DEIS, 2. This is especially important when approving new herbicides with varying effects and volatile active ingredients.¹

The Oregon BLM must address the risks inherent in the use and application of the proposed herbicides on BLM lands.

A. The proposed increase in herbicide use may harm Oregon's waterways and puts the BLM at risk of violating the Clean Water Act.

The Clean Water Act declares a national goal that the "discharge of pollutants into the navigable waters be eliminated." 33 U.S.C.A. § 1251 (1)(a). The Act defines pollutants as "chemical waste" and "biological materials," which includes herbicides.²

¹ A recent example of civil litigation in Idaho demonstrates the necessity of taking extreme precaution when using new, powerful herbicides on BLM lands. In August 2009, a "jury in U.S. District Court in Boise . . . found the BLM [Idaho] and chemical manufacturer E.I. DuPont de Nemours & Co. negligent in four sample cases of the lawsuit filed by a coalition of farmers." <http://www.idahostatesman.com/newsupdates/story/909282.html>, Laurie Welch, *Idaho Farmers Regroup After Oust Chemical Disaster*, Idaho Statesman, September 23, 2009 [hereinafter Welch]. In 2000, Idaho BLM began to use the powerful herbicide sulfometuron methyl ("Oust") (one proposed for implementation and increased use in BLM Oregon lands) on "wildfire scored public lands to control weeds." *Id.* Due to unanticipated weather conditions and misapplication of Oust, the herbicide spread and caused irreparable damage to thousands of acres of private as well as public BLM land. *Id.* BLM was declared 40% responsible due to its "negligence with respect to the selection of Oust and/or the application sites." *Adams v. United States*, 2009 WL 2823665 (2009). The damages in that case could exceed \$200 million. Welch.

² Indeed, the U.S. Court of Appeals for the Sixth Circuit recently determined the Environmental Protection Agency's attempt to designate pesticides as non-pollutants was inconsistent with the plain meaning of the Act, and thus was unlawful. *National Council of America v. U.S. E.P.A.*, 553 F.3d 927 (6th Cir. 2009). As a result, BLM will be required to obtain a permit before it will be able to lawfully apply these herbicides near a water of the United States.

BLM's proposed alternative threatens to harm Oregon's water supply via increased herbicide use. First, because BLM plans to use aerial application of herbicides, the probability of unanticipated drift reaching navigable waters grows with every added herbicide and every increase in the amount of acreage sprayed. Though Oregon has statutory law prohibiting pesticide application in a "careless or negligent manner," often the labels relating to drift are ambiguous. Caroline Cox, *Indiscriminately from the Skies*, Journal of Pesticide Reform, 4 (1995) (<http://www.pesticide.org/drift.pdf>). In an attempt to reduce drift damage, regulatory agencies often "mandate protection zones around bodies of water larger than the buffer zones called for on herbicide labels," which can be an arduous and inexact process. *Ebbetts Pass Forest Watch v. California Dept. of Forestry and Fire Protection*, 43 Cal.4th 936, 954 (Cal. 2008). Therefore, even if BLM aerially applies the herbicides in compliance with the labels, it runs the risk of acting in a negligent manner by failing to designate a sufficiently large buffer zone around navigable waters. Considering the high density of adjacent waters to some of the areas where aerial application is proposed, the probability of herbicide drift entering navigable waters increases significantly under BLM's preferred alternatives.

Second, many of the new herbicides are proven to contaminate groundwater. Due to their chemical composition, many of the new herbicides pose a high risk of contaminating Oregon's groundwater. Of those herbicides proposed for the use of terrestrial vegetation control; bromacil, dicamba, hexazinone, imazapic, and tebuthiuron are proven groundwater contaminants. *DEIS*, 164-166. Many of the other proposed herbicides are thought to have similar capacities for groundwater contamination. *Id.* Because such contamination is commonly known to have adverse effects on human, plant, and animal populations, BLM must implement application protocols to minimize or eliminate the risk of groundwater contamination. Moreover, BLM must closely monitor not only the application of these chemicals, but the local groundwater in order to detect any resulting groundwater contamination.

The increase of herbicide use may significantly elevate the probability of herbicide entering navigable waters through groundwater contamination and aerial drift. BLM must apply any herbicide with the utmost caution and should consider non-toxic alternatives.

B. BLM Fails to Adequately Address Potential Harm to Non-Target wildlife

The DEIS discusses potential harm to wildlife briefly, but fails to address when and which herbicides might come into contact with wildlife and the impacts to these species.

i. BLM's DEIS fails to adequately address the effects on species particularly vulnerable to herbicides such as amphibians, reptiles, and mollusks.

Some animals are more susceptible to herbicides than others. For example, amphibians and reptiles are particularly vulnerable.

Amphibian declines have received more attention in terms of research and publicity, but Gibbons et al. (2000) suggests reptiles may be exhibiting declines that are even more precipitous. Both are adversely impacted by

invasive plants (including invasive fauna as well as weeds) (Hinton and Scott 1990 cited in Gibbons et al. 2000), and are *also vulnerable to the treatments to control weeds*. Reptiles, particularly the Bureau Sensitive painted turtle and western pond turtle, have long seasonal metamorphosis periods when they are particularly susceptible to all types of management activities.

DEIS, 209. Specifically, herbicides are known to affect amphibians' reproductive functions and future breeding. Relyea, R.A., *The Lethal Impact of Roundup on Aquatic and Terrestrial Amphibians*, Ecological Applications, Vol. 15, No. 4, at 1118, 2005. Further, amphibians breed close to bodies of water—including temporary wetlands that may be dry at certain times of the year—and thus will be directly and indirectly impacted by herbicides that are applied in these locations. *Id.* Despite this, BLM fails to discuss the potential harm to amphibians and therefore, the agency's DEIS is inadequate.

Moreover, a lack of research does not excuse BLM from discussing potential effects on amphibians.

Mollusks are also vulnerable to herbicides. Sixty-nine percent (69%) of freshwater mussels are extinct or threatened in North America. Any increase in pesticides in the water will increase the risk to the species. *DEIS* at 209. BLM concedes only that "some herbicides have low toxicity to mollusks," but provides no further analysis. *Id.* BLM must take a harder look at what effects increased pesticide use will have on mollusks.

Finally, rare butterflies classified under the Oregon Special Status Species may be decimated altogether.

ii. BLM's Endangered Species Act analysis is insufficient and does not fully address potential impacts to listed species and critical habitat.

BLM's DEIS details no plan for where and when applications of herbicides will occur. Consequently, there is no guarantee that these herbicides will not detrimentally affect the critical habitats of endangered species in Oregon. Although BLM has consulted with Fish and Wildlife Service (FWS) and National Marine Fisheries Service as required under Section 7 of the Endangered Species Act (ESA), it has only been minimally assured that the new herbicide proposal "would not likely adversely affect any threatened or endangered species under the jurisdiction of the FWS." *DEIS*, 437. FWS recognized that additional consultations would be needed in order to approve site-specific applications near those habitats. Consulting with FWS about every site-specific herbicide application is unrealistic.

Twenty species have critical habitat designations in Oregon. Many of these protected areas, including the watersheds inhabited by chum, coho and chinook salmon, bull trout and steelhead, and the northern spotted owl are found on BLM lands. See NOAA Fisheries, Office of Protected Resources, Critical Habitat, <http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm> (last visited Nov., 2009); [<http://www.fws.gov/pacific/ecoservices/nsofch.html>].

The DEIS does not adequately address the effect herbicides will have on endangered species and critical habitat. BLM recognizes, only indirectly, that certain listed species, including rare butterflies and moths, might be at risk. BLM contends that animals may be frightened out of the area of herbicide application by noise, consequently avoiding direct contact with the herbicides. This claim is purely speculative and leaves animals that cannot leave the area, like pre-fledgling birds, in imminent danger. DEIS, 213. These direct, indirect and cumulative impacts must be addressed in the EIS.

The protection of endangered species should be a priority to BLM. BLM must include measures to ensure for the protection of threatened and endangered species in every alternative considered in the EIS.

iii. BLM marginalizes short-term impacts on wildlife.

In spite of the BLM's claims, many plants and animals may be harmed during the application of herbicides. BLM's DEIS fails to analyze "short term effects" on wildlife during and directly following the application of herbicides.

Because long-term effects are the focus of BLM's analysis, it is unclear how many plants and animals will be killed or harmed during application, and how that immediate contact might contaminate future generations. The cumulative effect could be devastating. While long-term effects are very important, the lack of attention given to short-term effects and the fact that many plants and animals might perish as a result of direct application is unacceptable.

C. The use of herbicides to manage invasive species trades one harm for another.

The DEIS correctly recognizes that the environment depends on a careful balance, and that invasive species have compromised that balance. However, the spread of invasive species is not a foregone conclusion as BLM's DEIS presumes. Indeed, invasive species need to be managed prudently. BLM's DEIS aptly states that invasive species would not be a problem but for the activity of humans.

Nearly all Oregon native wildlife is dependent upon some mosaic of habitat created and maintained by those natural disturbances. Anthropomorphic (human) activities have complicated the disturbance pattern and brought irreversible changes to the natural environment. Humans have introduced non-native plants and animals—including both beneficial and invasive plants.

DEIS, 209. What must be emphasized, and what is overlooked in BLM's DEIS, is that herbicides are similarly introduced into the environment by humans. Toxics can affect that delicate balance in ways we may not immediately understand, and in ways that may exceed the danger of invasive species. The precautionary principle mandates that BLM take a conservative approach until further research conclusively demonstrates that

that the introduction of new herbicides is safe and will not have unintended consequences.

Conclusion

Increasing the use and breadth of herbicides on thousands of square miles in Oregon should be a matter handled with only the utmost sensitivity, concern, and caution. While we appreciate the hard work put into BLM's DEIS, NEDC and ONDA are deeply concerned that the harm of introducing new herbicides on public land will outweigh the benefits. BLM's analysis largely discounts the utility of toxic-free alternatives and the proposed alternatives each pose a significant threat to wildlife and humans. NEDC and ONDA urge BLM to provide a full and accurate analysis of the potential effects of expanded herbicide use on BLM lands.

Respectfully submitted,

Jason Yarashes
NEDC volunteer

Kelly Cramer
NEDC volunteer

Jenny Loda
NEDC volunteer

Dave Becker
ONDA Staff Attorney

LITERATURE CITED

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