

December 1, 2009

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Dear BLM

Please consider these comments from Umpqua Watersheds, Cascadia Wildlands, Klamath Siskiyou Wildlands Center and the Center for Biological Diversity, on the Vegetation Treatments Using Herbicides on BLM Lands in Oregon DEIS. Please choose the Alternative 1 – no herbicide use, to give you an opportunity to develop an alternative that greatly reduces the amount of herbicides used below that of alternative 3.

We acknowledge that some herbicides are occasionally needed to address the immense problem of non-native, invasive plant species in Oregon. However, Alternatives 2 through 5 also target native plants, reduce much needed manual-labor jobs, depend too much on fossil-fuels, depends too little on prevention, and increases poisons in our environment when other options should have been considered.

The preferred alternative of this project proposes to:

- * increase herbicide use on public BLM lands in Oregon, from 17,000 acres annually, to 45,000 acres, of which 15,000 acres is killing Oregon's native vegetation¹, while the remainder, 30,000 is to kill invasive plants;
- * address the court's 1984 injunction against BLM using herbicides in Oregon, except for four herbicides² currently used. The court determined that the BLM had not addressed the cumulative human health effects of other herbicides;³
- * aerial spray herbicides east and west of the Cascades
- * spray herbicides along roads and developed areas to control native vegetation;
- * spray western juniper in shrub/grass communities in lieu of wildfire reintroduction;
- * kill tan oak in Southern Oregon before SOD can kill it;
- * make 12 herbicides available to BLM to use west of the Cascades, and 16 herbicides east of the cascades;
- * use herbicides still under study by the EPA and NMFS before conclusions on their safety;

While we agree that invasive, non-native plants are a large problem, our comments question if other options are available, such as a vigorous prevention program, or using more manual labor.

¹ DEIS page 291

² 2,4-D; dicamba; glyphosate; and, picloram for noxious weed control only.

³ DEIS page 1

1. Herbicide studies are incomplete

Studies are not complete on how herbicides affect classes of people, such as the elderly, or pregnant women and fetuses. Tiny amount of poisons on developing fetuses could have life-long impacts. This is especially problematic in the checkerboard landownership pattern of western Oregon, where BLM only knows where the registered water users are when using herbicides, and is unaware of thousands of unregistered water users.

The BLM should wait until studies on herbicides are complete before using them.

In April 2009, the EPA released a list of 67 pesticides that will be tested for potential to cause endocrine disruption.⁴ At least two, Glyphosate and 2,4-D are being used by the BLM now, and considered for continued use under this DEIS. Based on currently available toxicity information that demonstrate effects on the thyroid and gonads following exposure to 2,4-D, there are some data supporting its endocrine disruption potential and EPA is studying this further (EPA 2005a).

The BLM should immediately halt the use of these herbicides until the EPA studies are complete. Only stopping after the studies are find harm is irresponsible.

The National Marine Fisheries Service is examining the impacts of 37 pesticides on protected salmon and steelhead, including 3 chemicals used or proposed for use by the BLM: 2,4-D, diuron, and triclopyr BEE (a form of triclopyr).⁵ Instead of using those chemicals until they are found harmful, the BLM should immediately stop using until they have been found safe for fish and humans. But the BLM states they will continue to use herbicides the NMFS are examining because “BLM proposed use is not likely to substantially contribute to anadromous fish effects”⁶. The BLM cannot back-up this claim because the studies are incomplete. The FEIS should remove unsubstantiated claims like this. The BLM should not use any herbicides until studies are complete.

Likewise, the BLM should halt all use of 2,4-D until the EPA considers it further. The BLM herbicide EIS tells us:

“On November 6, 2008, the Natural Resources Defense Council (NRDC) petitioned the EPA to revoke all tolerances and cancel all registrations for 2,4-D. As a part of the petition, NRDC asserts that the Agency did not consider the full spectrum of potential human health effects associated with 2,4-D in connection with EPA’s reassessment of the existing 2,4-D tolerances, and EPA’s ecological risk assessment.”⁷

This assessment includes the endocrine disrupting effects of 2,4-D; information on the neurotoxicity related to 2,4-D exposure; information that products containing 2,4-D are mutagenic; data showing 2,4-D absorption through the skin is enhanced by alcohol

⁴ DEIS 314

⁵ DEIS 90

⁶ DEIS 90

⁷ DEIS 91.

consumption, sunscreen, and mosquito repellent; and information about adverse developmental effects at very low doses for exposure of infants to 2,4-D in breast milk. These are serious issues, and the DEIS states that “The BLM will comply with the final decision.” But in the meantime, before the studies are complete, the BLM will increase herbicide spraying in people’s drinking watersheds, public picnic areas, public right-of ways, any pipeline right-of-ways that go near homes, etc. Clearly, this is irresponsible.

The BLM must halt all use of 2,4-d until the studies find it is completely safe to use.

2. Glyphosate

We are referencing comments that address the dangers of specific chemicals in a separate document. However, in these comments, we are including more recent studies, particularly studies showing the problems with Roundup containing Glyphosate.

The recent June 23, 2009 issue of Scientific American had an article on Roundup titled: “Weed-Whacking Herbicide Proves Deadly to Human Cells”⁸. The summary says:

Used in yards, farms and parks throughout the world, Roundup has long been a top-selling weed killer. But now researchers have found that one of Roundup’s inert ingredients can kill human cells, particularly embryonic, placental and umbilical cord cells..... Glyphosate, Roundup’s active ingredient, is the most widely used herbicide in the United States. About 100 million pounds are applied to U.S. farms and lawns every year, according to the EPA. Until now, most health studies have focused on the safety of glyphosate, rather than the mixture of ingredients found in Roundup. But in the new study, scientists found that Roundup’s inert ingredients amplified the toxic effect on human cells – even at concentrations much more diluted than those used on farms and lawns. One specific inert ingredient, polyethoxylated tallowamine, or POEA, was more deadly to human embryonic, placental and umbilical cord cells than the herbicide itself – a finding the researchers call “astonishing.” “This clearly confirms that the [inert ingredients] in Roundup formulations are not inert,” wrote the study authors from France’s University of Caen. “Moreover, the proprietary mixtures available on the market could cause cell damage and even death [at the] residual levels” found on Roundup-treated crops, such as soybeans, alfalfa and corn, or lawns and gardens. The research team suspects that Roundup might cause pregnancy problems by interfering with hormone production, possibly leading to abnormal fetal development, low birth weights or miscarriages.

The BLM should consider this new information and ban the use of glyphosate. The BLM must also consider the cumulative impacts of using glyphosate in watersheds with other industrial landowners using glyphosate. This is important data to consider to protect the health of the public.

Using Roundup in or above Riparian Reserve also does not comply with the Aquatic

⁸ <http://www.scientificamerican.com/article.cfm?id=weed-whacking-herbicide-p>

Conservation Strategy.

Fish and aquatic invertebrates are more sensitive to Roundup than terrestrial organisms. Glyphosate is generally less persistent in water than in soil, with 12 to 60 day persistence observed in Canadian pond water, yet persistence of over a year have been observed in the sediments of ponds in Michigan and Oregon.

The EU classifies Roundup as R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.⁹

Although Roundup is not registered for aquatic uses and studies of its effects on amphibians indicate it is toxic to them, scientists have found that it may wind up in small wetlands anyway due to inadvertent spraying during its application. A recent study found that even at concentrations one-third of the maximum concentrations expected in nature, Roundup still killed up to 71 percent of tadpoles raised in outdoor tanks.¹⁰

3. Prevention

The EIS must consider preventing the spread of weeds before resorting to eradication methods, especially when using toxic poisons like pesticides. For forestry practices, this would include avoiding large clearcut openings, exposing the forest floor to sunlight and disturbance, and promoting the spread of invasive and noxious weeds. The DEIS failed to include an alternative that fully embraces prevention by eliminating large, artificial canopy openings.

Legal and illegal Off Highway Vehicle (OHV) use is also a vector for invasive and noxious weeds. Illegal OHV use is profound on western Oregon BLM lands because, BLM claims, they have a shortage of law enforcement officers. The DEIS failed to adequately consider reducing damaging OHV use, and increasing law enforcement.

Fire suppression causes unwanted vegetation that the DIES proposes to kill with herbicides, instead of considering reintroducing a more natural fire regime. For instance, the BLM proposes to spray western juniper where it grows in what was historically a shrub/grass plant community. The DEIS says, page 8: “For example, fire suppression has resulted in a many fold increase in the number of Western junipers in eastern Oregon when compared with historic levels.... The use of herbicides could facilitate restoration of habitats for nesting sage grouse and other species.”¹¹ The BLM ignores the potential to reintroduce fire instead of using herbicides.

Another example where the BLM refuses to prevent problems by allowing a more nature wildfire process is #4 of the The Purposes (page 8) “Manage vegetation to reduce the risk that large-scale high-intensity fires will unacceptably damage resources and human developments.” It is unreasonable for the BLM to propose to use herbicides to kill fire-

⁹ <http://en.wikipedia.org/wiki/Roundup>

¹⁰ For the 6 references to these claims, see: <http://en.wikipedia.org/wiki/Roundup>

¹¹ DEIS 8.

suppressed vegetation before considering the use of fire itself.

The DEIS failed to include an alternative that modifies some of their permitted uses (even permitted through lack of law enforcement) that promote invasive weeds, such as OHV use, cattle grazing, regeneration harvests, and fire suppression, all of which promote the spread of invasive weeds. Instead all alternatives continue those uses unchanged, and simply increases herbicides.

There is a need to address weeds, but toxic chemicals should be used minimally and as a last resort. Maintaining native forest cover, maintaining native shrubs and grasslands, and preventing disturbance of soils, is the best prevention.

4. Jobs

The DEIS failed to consider the impact of herbicide use on local jobs. The DEIS used 2005 data – before the economic downturn, for the economic analysis. Clearly, this section should have been updated for the 2009 DEIS, and must be updated for the FEIS.

Oregon has one of the highest unemployment rates in the country. Manual vegetation control currently provides jobs. These numbers could be reduced by greater herbicide use. The DEIS should have disclosed the direct job losses for each alternative, or the job gains in alternative 1.

For unwanted native plants around recreation and industrial areas, opportunities to provide local jobs would be abundant. Yet the BLM's DEIS says nothing about this employment opportunity. Removal of blackberries and other invasive plants also provide manual job opportunities, especially to the highest unemployed sector, youth and rural residents. Instead, the DEIS only focused on the loss of jobs due to the spread of invasive plants, but never considered the gain in jobs manually controlling those invasive plants.

The DEIS states that vegetation within roads and other right-of-way is more expensive to control manually (page 5). However, the BLM failed to consider the cost of unemployment.

The DEIS tells us that under Alternative 2, no-action, 20,600 acres of manual and mechanical treatment would be performed by contract crews.¹² But the DEIS fails to tell us how many of those workers would loose their jobs under other alternatives.

Under alternative 3, the 20,600 acres of manual/mechanical treatment is reduced to 17,100 acres, thus reducing jobs. Inexplicably, the DEIS fails to explain how much more manual/mechanical treatments (and jobs) are decreased under alternatives 4 and 5.

Since so much of Oregon is owned and managed by the BLM, jobs on BLM managed lands are critically important to our economy. Failing to do any jobs analysis at all in the

¹² DEIS page 297

DEIS is irresponsible and a violation of NEPA.

5. Cumulative impacts and the ACS.

The DEIS failed to consider the cumulative impacts of herbicides to public resources on the west side of the cascades because of the checkerboard with private industrial forest owners. Private industrial forest owners spray a lot of herbicides, and they can aerial spray to within 60 feet of people's homes. They can spray right over non-fish bearing stream with virtually no buffer.

The BLM failed to consider the cumulative impacts of what the BLM wants to spray in the same watersheds. The BLM should have considered what chemicals industrial land-owners use and how it interacts or cumulatively adds to the chemicals that BLM wants to spray in the same watersheds, impacting the same fish downstream, the same water intake for a families drinking water, and the same air breathed by all living things in the area.

The BLM failed to consider the impact of spraying herbicides in riparian reserves, or herbicides that will move into riparian reserves, on meeting the goals of the Aquatic Conservation Strategy. Chemicals that harm aquatic species and native aquatic plants do not meet the ACS. Removing native plants from reserves (such as in campgrounds), does not meet the goals for the ACS.

6. Checkerboard land configuration must be considered.

Because of BLM's unique land configuration in western Oregon, a 1-square mile checkerboard of public and private lands, the use of pesticides in Oregon can have much more impacts on people.

Many of the sections interspersed with BLM land contain rural residents, with some homesteads established over a hundred years ago. Therefore the BLM in Oregon has many more family neighbors than any other BLM lands in the United States. The DEIS failed to adequately consider the impacts of spraying in the watersheds that these families use for their household drinking water. Because many of these residences were established before the advent of modern water-right regulations, there are countless streams of domestic water use that are not registered with the state.

The BLM does claim they are allowed to pollute drinking water with 70 ug/l of 2,4-D, 700 ug/l of glyphosate, 500 ug/l of picloram, and 210 ug/l of heazinone¹³, including the cumulative impacts of industrial forestland spraying. Before the BLM does this, they should specifically consult with the people drinking the water, and check to see if the allowed pollutants could impact any special health conditions of that population.

¹³ DEIS 160

The BLM is allowing herbicide spraying as close as 100 feet to people's houses¹⁴. In the past, (alternative 2) the BLM has even been misleading about spraying in people's drinking watersheds. For instance, take the Wolf Pup timber sale in Medford BLM. During scoping, citizens asked that none of the logging roads above property owner's water intakes, roads that would be used for logging trucks in the Wolf Pup project, be sprayed with herbicides.

The BLM responded in the EA: "No herbicides or pesticides would be used in conjunction with this project"¹⁵. What they failed to say is that herbicides or pesticides would be used in conjunction with another NEPA analysis – the previous BLM vegetation EIS and perhaps a programmatic CE that allows spraying herbicides before logging roads are used for a timber sale. The Medford BLM used confusing language in the EA about "treating" weeds, completely failing to disclose that the treatment would include using herbicides – even after the public specifically asked them not to use herbicides.

New herbicide treatments tiered to this DEIS could include the same problems. There are no automatic neighbor notification and confusion remains on how herbicides will be used for specific projects. Herbicide applications will likely be Categorical Excluded from NEPA, which means that the public will now know about the spraying until after it occurs. (CE's only appear in the Quarterly Planning Updates after the occur).

7. Commodity Production

The DEIS states (page 1 and 14): "This EIS does not propose the use of herbicides specifically for commodity production such as projects to improve timber growth or livestock forage." This statement is not reflected in the rest of the DEIS. Throughout the DEIS, the BLM describes how vegetation impacts commodities and economics, and the need to remove weeds to increase commodity production. For instance, the DEIS describes how ranching and logging on lands adjacent to BLM will commercially benefit by the BLM using herbicides.

Another example (page 9) describes how herbicides will be used to control Sudden Oak Death because the BLM needs to protect the local nursery industry: "Many of Oregon's plants are also used by the nursery industry and transported worldwide."

The DEIS describes how herbicides are needed to protect tree-plantations from undesirable weeds (page 246) that "slow regeneration and tree seedling growth". This is an entire section on the environmental consequences on timber production.

In fact, it is the goal for greater commercial production and higher economic return that drives most of BLM's herbicide use – everything from roadside spraying for log truck passage to utility right-of-ways, to cheat grass spraying to increase cattle grazing.

¹⁴ DEIS 414

¹⁵ Wolf Pup Project EA. BLM Medford District, Glendale Resource Area. October 2009. Page 81.

Clearly, the BLM mis-spoke when claiming commodity production has nothing to do with their decisions to use herbicides or not.

8. Spraying regeneration harvests.

At the scoping meeting in Roseburg, the BLM emphasized that herbicide spraying would never be used to enhance commodity production of public forests. However, when asked if this DEIS would allow spraying of regeneration harvests, the BLM was unsure. While spraying would not be used for commodity production, clearcuts do promote unwanted weeds, so spraying of regeneration harvests is likely. In fact, page 49 of the DEIS shows a picture of a helicopter aerial spraying a clearcut.

In spite of these scoping comments, the DEIS failed to make it clear if spraying of regeneration harvests would be allowed under any alternative, and if aerial spraying of regeneration harvests is allowed under the no-action alternative and alternative 5.

The DEIS failed to adequately consider the detrimental impacts of aerial spraying thousands of acres of clearcut forest land, such as spraying near people's homes, spraying over small headwater streams, impacts to amphibian species, impacts to species that are drawn to forest openings, and increased cost of forest management.

There are many unknown variables that could occur during spraying, such as a change in wind speed or direction, a temperature increase volatilizing the poisons, human error, unclear boundaries around domestic water sources, etc.

9. Aerial Spraying

Only alternatives 3 and 4 do not permit aerial application of herbicides west of the Cascades¹⁶. This should be a part of all action alternatives. It should especially be a part of alternative 2, the current herbicide program.

As far as I'm aware, the BLM currently does not do aerial applications of the four herbicides currently used. Therefore, alternative 2 should also prohibit aerial spraying to be a true no-action alternative. The BLM must explain why this change is proposed in alternative 2.

West of the cascades the BLM lands are intermixed with private lands. The nightmare of all nightmares is when, the forest behind your house is clearcut and then the helicopters start aerial spraying chemicals, chemicals still under study for their health effects.

Helicopters cannot spot small, intermittent streams from the air, and thus could spray directly into flowing water. Doing this in the checkerboard is irresponsible, especially

¹⁶ DEIS 17

with such horrific chemicals as 2,4-D.

The EA confirms that for aerial spraying west of the cascades, “high density of streams, seeps, and other water bodies, coupled with dense vegetation, can make water difficult to avoid. Steep varied terrain coupled with tall vegetation (including dead trees) can force pilots to fly relatively high, increasing the risk of drift to water, non-target plants, and other non-target areas. Checkerboard and other land ownership patterns, some related to the far higher population density west of the Cascades, also tend to make aerial application more difficult.”¹⁷

The SOPs say: “...avoid aerial spraying near agricultural or densely populated areas.”¹⁸ This seems to imply that rural residents are not avoided. Clearly, all aerial spraying in western Oregon must be prohibited (not simply avoided).

10. Sudden Oak Death

The DEIS described the eradication of Tan Oak in SOD areas. However, the BLM failed to discuss where SOD eradication will stop, or the impacts of spraying more acres, including wildlife-important oak woodlands containing black oaks. We are concerned that this DEIS will allow the BLM to kill black oaks (or other tree species susceptible to SOD). Oak trees are critically important to wildlife, both as a food source and for nesting. The BLM should not kill any black oaks at all. The only way to find which black oaks are resistance to SOD would be to see which trees survive. Killing healthy black oaks that might get sick in the future would be a travesty.

11. Human Error

The DEIS failed to adequately consider the impacts of mistakes, impacts to the ACS, wildlife, and human health. Mistakes will happen and herbicides will be applied in places and at times that are not allowed.

As an example, the Roseburg BLM mistakenly allowed native roadside vegetation to be killed with herbicides in an application near the Myrtle Creek timber sale in 2007. When we examined the units in preparation for commenting on the Environmental Assessment, the smell of herbicides was overwhelming, and dead thimbleberry, a valuable wildlife food, was dying in large clumps near the road, including near culverts (riparian areas). Even though we later found out that 2-4D was used, there was no notices posted along side the road, where the public travels (like families with children and dogs). We were especially concerned because we knew of landowners who had spring boxes for their household water use, beneath the roads in the project area.

When we asked the BLM for an explanation, we were told that there was no requirement

¹⁷ DEIS 22

¹⁸ DEIS 406

to post signs in an area has been sprayed (unfortunately the DEIS did not change that.) The BLM also responded they had contracted the spraying to the Douglas Soil and Water Conservation District. Ralph Thomas replied:

“The instructions given by the BLM to the Douglas Soil and Water Conservation District were that only Scotch broom and blackberry were to be sprayed. Consequently, the information you provided came as a surprise. I had two of my resource supervisors and Field Office botanist conduct an inspection of a number of roads that were to be sprayed to judge what the outcome of the treatments had been. On several roads they found impeccable compliance with the directions given, while on other roads they observed circumstances similar to what you described.

As a follow-up, the Field Office botanist and environmental coordinator arranged for an on-site review with the program administrator from the Douglas Soil and Water Conservation District and a foreman from one of the crews that conducted the spraying to discuss what had occurred and why. Following are some of the observations and conclusions reached during the meeting.

First, these crews also work on private timber lands where the use of herbicides is not subject to the same limitations that exist on BLM lands. On private lands herbicides are used in lieu of brushing to control vegetation encroaching on roads. Consequently, some of the applicators sprayed willow and big-leaf maple even though they were not supposed to do so. The Douglas Soil and Water Conservation District representative recognized and stated that he would likely need to conduct additional orientation for contractors stressing the difference in the objectives of herbicide use on federal and private land and the need to adhere to the instructions for application on BLM lands.

Second, not all of the spray damage was intentional or permanent. In many instances there were maple saplings growing amidst brakes of Scotch broom and blackberry. These maples were subject to the inadvertent effects of drift and volatilization of the herbicide, leading to some loss of foliage that, in most cases, was not deemed sufficient to kill the trees.

Third, there have been other landowners with intermingled holdings who have been conducting herbicide treatments in the area. This was evident in one area visited, as the herbicide could still be smelled. Such was not the case on BLM roads where applications were made a month and a half ago. It is also unclear as to whether or not the individuals who were spraying private lands may also have inadvertently treated some roads on BLM lands.”¹⁹

While we appreciated the clear explanation, and BLM’s suggestions to avoid these types of human errors in the future, this example is the type of problems encountered when dealing with powerful herbicides in public areas. It is an especially good example of the problems encountered when working within the unique checkerboard land situation in western Oregon. Knowing the locations of land boundaries is difficult, both for BLM

¹⁹ Letter from Ralph Thomas, Field Manager, S. River Field Office, to Francis Eatherington. 9-28-2007

contractors and private land contractors, and for both ground and aerial applications. Human error is inevitable and should have been considered in the DEIS.

The different vegetation control techniques of industrial and BLM lands in the checkerboard are also prone to repeated human error. Human error can occur in technique and land-ownership in either ground or aerial herbicide applications. This is especially problematic because of the use of the areas by the public, including children and pets, and including domestic water sources.

The DEIS failed to adequately consider that human error will occur, that increased herbicide use will have increased human error, and what those impacts to the environment and the public are.

12. Global Warming

Herbicides are a petroleum product, and thus their use increases the problems of global warming caused by the extraction and use of fossil fuels. The DEIS failed to consider this, or consider the increased costs of petroleum products as this resources becomes more scarce.

The DEIS claims manual methods of weed control is not desirable because those methods use fossil fuels²⁰, but never admits that herbicides are made from fossil fuels, and their application uses fossil fuels, equating to likely a far greater fossil fuel use than manual control methods.

Every BLM project should consider the impact on carbon storage, including this DEIS.

In conclusion:

The BLM has been successful in controlling weeds over most BLM managed lands without herbicides over the last couple of decades. The DEIS failed explain what is wrong with increasing current use of manual controls, as well as increasing prevention techniques, before increasing the use of herbicides.

The DEIS failed to consider the impacts of pesticides even if label instructions are followed. Labels often do not consider the latest scientific findings, such as new information on impacts to amphibians and long-term impacts to human health. In fact, many pesticides are released for use while still undergoing tests. Many tests do not consider the impacts on developing fetuses, the very old, or people with a weakened immune system. Especially in developing bodies, even a very tiny amount of chemicals can severely impact brain or hormonal development at certain times.

Also consider comments submitted in 2006 on the BLM's *Draft Vegetation Treatments*

²⁰ page 9

Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS (DEIS) and Draft Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (PER). In particular, consider comments dated February 10, 2006, submitted by Sagebrush Sea Campaign and Caroline Cox²¹, on behalf of signers below. Appendix J, Table 1 on page 105, lists many of the herbicides proposed by BLM in Oregon and their health effects, with clear and compelling references. Please consider these health impacts on Oregonians, and eliminate the herbicides that are on the Pesticide Action Network's "bad actor" list, which was created to identify "most toxic" pesticides. Oregonians deserve to live healthy lives, with pesticide-free watersheds and wildlife.

Sincerely

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²¹ PDF file of these comments are available upon request.