

Data Submitted (UTC 11): 5/5/2014 12:00:00 AM

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Comments: Comments for DSEIS

I wish to make the following comments regarding the DSEIS for the Invasive Plant Control Project, MB-R3-16-11

Thank you,

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1. Research cited is outdated. New research is not always considered.

Sources in the DSEIS come from as far back as 1987 (glyphosate drift), 1989 (2, 4-D), 1990 (hexazinone & chlorsulfuron), and 1995 (picloram). The majority of herbicide-safety research cited is from 2003 or prior, though some citations from 2013 are included. However, the body of research emerging within the last 5 years regarding endocrine disruption and cell death based on toxicity of residue rather than overapplication: Benachour, N.; Seralini, G-E. (Dec 2008). "Glyphosate Formulations Induce Apoptosis and Necrosis in Human Umbilical, Embryonic, and Placental Cells." *Chemical Research in Toxicology*. 22 (1): 97-105. DOI: 10.1021/tx800218n, the role of surfactants: Oldham, J.; Massey, R. (March 2002). "Aerial Spraying in Colombia: Health and Environmental Effects." *Institute of Science and Interdisciplinary Studies*. Amherst, MA. <http://www.tni.org/sites/www.tni.org/archives/drugscolumbia-docs/healthenvironment.pdf> <<http://www.tni.org/sites/www.tni.org/archives/drugscolumbia-docs/healthenvironment.pdf>> & Hartzler, B. (2003). "Role of spray adjuvants with postemergence herbicides." *Iowa State University*. <http://www.weeds.iastate.edu/mgmt/2001/additives.htm> <<http://www.weeds.iastate.edu/mgmt/2001/additives.htm>> , and breakdown of glyphosate in water USGS (Dec 2013). "Glyphosate Herbicide Found in Many Midwestern Streams." *USGS Environmental Health - Toxic Substances*. <http://toxics.usgs.gov/highlights/glyphosate02.html> <<http://toxics.usgs.gov/highlights/glyphosate02.html>> has not been considered. The research listed above is just a sample of available research. Dozens of other papers are available from peer-reviewed journals and government sources within the US and abroad. Citation of these papers has led to the banning of herbicides proposed by the USFS for use, such as Sri Lanka banning glyphosate in March of 2014 (<http://ecowatch.com/2014/03/21/sri-lanka-bans-monsanto-herbicide-kidney-disease/> <<http://ecowatch.com/2014/03/21/sri-lanka-bans-monsanto-herbicide-kidney-disease/>> ) on the basis of its linkage to kidney disease. We ask that the USFS consider the most recent, best available science when evaluating herbicide safety.

2. Cumulative effects not addressed

The previous appellants requested that USFS address the concern of cumulative effects. The DSEIS does include a section with this topic but includes statements such as (P 40) "risk of exposure [to wildlife] is immeasurable" so "cumulate effect cannot be measured" but "unforeseen accidents expected." We propose that this immeasurable risk is too much risk and should either be soundly measured or this alternative should be rejected on the basis of the precautionary principle. We also request research regarding synergistic impacts.

3. Inadequate Mitigation

For instance, the FEIS p 167 the statement is made: "The application of the herbicide 2,4-D has been shown to increase the nitrate content of plants and the palatability of the plants, increasing the potential for poisoning.

Mitigation measures that defer the use of pastures treated with herbicides would avoid this impact." Deferring pastures may protect livestock but does not prevent exposure to animals. Herbicides are nonspecific, so the argument that endangered species (such as American Pika, p 81) will not be affected because they do not consume weeds is not a valid argument. The USFS itself acknowledges that short-term mortality of natives is expected. Because of this, all wildlife, including endangered species, will be exposed to pastures which have been treated with herbicides, and all plants in that area have the potential for increased levels of herbicides (toxicity) as well as nitrates which could result in methemoglobinemia. Therefore we consider the mitigation proposed by the USFS to be inadequate and request further efforts.

#### 4. New Research For Mobility of Herbicides & the Role of Surfactants is not included

Hartzler, B. (2003). "Role of spray adjuvants with postemergence herbicides." Iowa State University.

<http://www.weeds.iastate.edu/mgmt/2001/additives.htm>

<<http://www.weeds.iastate.edu/mgmt/2001/additives.htm>>

Oldham, J.; Massey, R. (March 2002). "Aerial Spraying in Colombia: Health and Environmental Effects." Institute of Science and Interdisciplinary Studies. Amherst,

MA. <http://www.tni.org/sites/www.tni.org/archives/drugscolumbia-docs/healthenvironment.pdf>

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Tenenbaum, D. (May 2002). "Coca-Killing Controversy." Environmental Health Perspectives. 110: A236.

<http://www.jstor.org/stable/3455320> <<http://www.jstor.org/stable/3455320>>

Benachour, N.; Seralini, G-E. (Dec 2008). "Glyphosate Formulations Induce Apoptosis and Necrosis in Human Umbilical, Embryonic, and Placental Cells." Chemical Research in Toxicology. 22 (1): 97-105. DOI:

10.1021/tx800218n We request that new information be considered regarding the mobility of herbicides in soils as outlined on (p116) & the impact of surfactants or inert ingredients (165) on toxicity. We also request that research regarding motility in soils be pertinent to New Mexican soils and not kiwifruit orchards (Wardle, et al as cited in DSEIS). Research such as those listed below suggest that herbicides, specifically glyphosate is more toxic when used with a surfactant than when used alone. Also of concern is the lack of inability to assess the inert ingredients and surfactants do to their proprietary nature. We therefore request that the USFS consider this new information when considering environmental and health impacts.

#### 5. Biologists "can" & "other qualified person"

We wish to draw attention to page 24 DSEIS where the plan allows that a biologist "can accompany applicators into the field to monitor for any potential owl activity that may occur." Why is the attendance of a biologist not mandated in this section? How will this biologist be funded, and is this funding included in the economic analysis of the alternatives? We seek clarification as well on the exact definition of an "other qualified person" who is allowed to substitute for the biologist required to monitor other endangered species. Are they at the training level of a biologist?

#### 6. Discrepancy in Maps & Available Data

We would like to point out that maps in DSEIS are not dated; but they were in FEIS. Why the discrepancy? We request that all maps include dates of data collected. Another concern is how the vegetation cover types were determined, because when using the technology LIDAR, there are some plants whose metabolisms cannot be aerially differentiated (e.g. cattail & western wheatgrass). We protest the lack of transparency regarding this data and request more information be disclosed to the public.

#### 7. Protest to the Santa Fe Forest Amendment allowing spraying in areas with low Re-vegetation potential

Concerning the clause of the amendment allowing spraying in areas with low re-vegetation potential (P117), we disagree that negative impacts will be overcome within 6 months. Other research has shown areas with low re-vegetation potential may not recover more than 10% of their vegetation cover, which still exposes 90% of the ground to potential erosion by wind and water. Sites with low re-vegetation potential tend to already have low hydrologic integrity. (<http://age-web.nmsu.edu/saltcedar/Restoration%20in%20the%20Southwest.htm> <<http://age-web.nmsu.edu/saltcedar/Restoration%20in%20the%20Southwest.htm>> ) We therefore demand more attention be paid to mitigation efforts and find that the current mitigation techniques proposed are inadequate or none. Without such mitigation, higher rates of soil erosion could result in decreased water quality, exceeding the MCL/TDML within the river, leading to noncompliance with the Clean Water Act and potentially additional economic impacts on downstream municipalities.

#### 8.American Pika Impacts

The American Pika has been sighted in areas not previously listed hence need more studies to determine the claim that there will be no disruption to the American Pika. Also where will funding come from to do such studies? As sightings of American Pika have been confirmed by individuals in areas not currently listed as known habitat. For this reason, intensive surveying will have to be done before herbicides can be allowed in an area, as outlined in the USFS plan. We wish to propose that USFS consider the impact of the cost of such surveying on the economical viability of Alternative C. Additionally, it is stated on page 81 that American Pika will not be impacted by herbicide spraying as it does not use weeds as a forage. As herbicides are non-specific they will not only kill weeds, but impact other palatable plants to the Pika and will therefore pose a threat to an endangered species.

#### 9.How are Wilderness Values defined?

This plan can be classified as a Violation of Forest Service Manual 2323.26b (page 133 DSEIS)) as it can be considered to have "serious adverse impacts on wilderness values" which includes environmental illness, wildlife impacts, etc. Wilderness values as defined by the 1964 Wilderness act "...are created through historical, cultural, and political experiences over time." In 2008, the common wilderness values held by the American public included "scenic beauty of wild landscapes, the knowledge that wilderness is being protected (existence value), the choice to visit wilderness at some future time (option value), the opportunity for wilderness recreation experiences, preserving nature for scientific study, and spiritual inspiration." (Cordell, H. K., Beltz, C. J., Fly, J. M., Mou, S. & Green, G. T. (2008). How Do Americans View Wilderness? <<http://warnell.forestry.uga.edu/nrrt/nsre/IRISWild/IrisWild1rpt.pdf>> ) The use of herbicides which causes mortality of natives and non-natives could be argued as an ineffective method of protection of wilderness in comparison with manual alternatives; the opportunities for visitation and recreation would be negatively impacted for those with environmental illness should Alternative C be used; and it can be argued that the use of herbicides is not a "preservation" of nature, nor is it spiritually inspiring. The impact on scenic views may be negligible. The recreational value is further addressed when the USFS admits on p 137 that "Alternative C would not be as effective at controlling newly established weed populations caused by recreational activities." For these reasons we request a re-evaluation of the impact on wilderness values, perhaps through a health impact assessment or other evaluation of what the publicly held wilderness values are that the USFS claims will not be seriously adversely effected.

#### 10.No established standards for AMPA

There are no established standards on glyphosate byproducts when they break down in water, specifically the byproduct aminomethylphosphonic acid (AMPA). AMPA never leaves the water supply except via carbon filtration which is beyond the economic ability of many municipalities (see USGS (Dec 2013). "Glyphosate Herbicide Found in Many Midwestern Streams."USGS Environmental Health - Toxic Substances.<http://toxics.usgs.gov/highlights/glyphosate02.html>

<<http://toxics.usgs.gov/highlights/glyphosate02.html>> ) We request that the impact and safety of AMPA be evaluated before herbicides are used.

11. Herbicides are not a viable option for use in perpetuity: Page 33 of the DSEIS states that "activities are anticipated to occur over approximately 10 years (or more)..." with activities increasing over the 10 year period (p 34). We wish to raise concerns regarding the development of resistance which is happening in other areas which have been treated with herbicides over a number of years, requiring that they be treated with alternative herbicides. See for instance: <http://rt.com/usa/156272-epa-dow-agent-orange-herbicide/> Why are herbicides not used only as a last resort? What steps will be taken to address the possibility of the development of resistance?