BEFORE THE USDA FOREST SERVICE ("Lead Agency")

SOUTHWESTERN REGION

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Comments Submitted Electronically (5 May 2014) To:
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Attention: Invasive Plant Control Team
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Substantive Comments
on the **Draft Supplemental Environmental Impact Statement**
and its companion document
the **Final Environmental Impact Statement for the Invasive Plant Control Project**

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_____INDIVIDUAL COMMENTERS_____

5 May 2014

Before:

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Patricia A. Leahan and Kathryn Mahan, as well as the other 30 above-named individuals ("individual commenters" – totaling 32) hereby submit the following timely and substantive comments on the Draft Supplemental Environmental Impact Statement ("DSEIS") and its accompanying Final Environmental Impact Statement ("FEIS") for the Invasive Plant Control Project ("Project").

(**NOTE**: We are not members of any mutual organization, but rather individual concerned community members who came together solely to research, write and submit these comments. Some of us do not have easy access to the internet. Some of us do not have email. Coming together to assist each other in the submission of these comments is not uncommon to rural northern New Mexico. For some of us, this is the only way we can most efficiently submit individual substantive comments. We expect to be acknowledged as 32 individual commenters. Thank you for your understanding.)

In accordance with all relevant statutes, Patricia A. Leahan and Kathryn Mahan, and the 30 other individual commenters are providing here timely and substantive comments on the DSEIS (and its accompanying FEIS) for this Project. These substantive comments are being filed with the Responsible USFS Official -- Maria T. Garcia -- within the mandatory 45-day time period that ends on 5 May 2014.

INTRODUCTION:

We believe this Project is flawed in its analysis and that Alternative B, chosen by the FS, represents unacceptable effects to human health, municipal drinking water supplies, wilderness areas, inventoried roadless areas and biological diversity in violation of the applicable laws and regulations enumerated below. Each of us supports Alternative C. HOWEVER, before we can adequately comment on the Project, an extension of 90 days is needed (see section **I** below). In the meantime, in the event that you do not grant us this extension, our substantive comments are below.

The scope of this Invasive Plant Control Project is enormous beyond comprehension. The DSEIS states that "of the 3,030,721 million acres of National Forest System lands in the project area, there are approximately 13,256 acres of known weed infestations" (p. 6), and that "the [weed] surveys completed to date do not cover the entire project area" (p. 6).

In perpetuity over 3 million acres of the Carson and Santa Fe National Forests, including numerous watersheds, wilderness areas, inventoried roadless areas, rivers and streams, and endangered species habitats, could be sprayed repeatedly with any one of thirteen herbicides. If, based on the Project, new herbicides become available in the future, then they too can be used without further analysis of their impacts. As a result, not one acre of the national forests in northern New Mexico is off limits to potential chemical contamination. This is unfathomable.

Also of concern is the decision to eliminate the nearly 3-decade old ban on ***any kind*** of chemical treatments in municipal watersheds and areas of human habitation on the Santa Fe National Forest. The project proposes no 'best practices' site-specific mitigation measures to protect vital drinking water supplies in municipal watersheds and no 'best available science' monitoring of harmful effects.

As demonstrated below, this sweeping new project will almost certainly result in a range of adverse environmental impacts that were not analyzed or disclosed in the DSEIS.

A member of the Forest Service planning team for the Project noted early in the original analysis that "there just doesn't seem to be enough evidence or any quantitative data to support some of the conclusions regarding soil erosion and stream sedimentation" and "we seem weak and vulnerable to a NEPA/NFMA legal challenge, and I am not certain that we would be affirmed if under appeal" (see project record). The data gathering done for the DSEIS fails to address this concern. Failing to require substantive post-treatment monitoring to accurately determine if the thousands of pounds of herbicides to be applied over the next decade will contaminate water resources or increase soil erosion also flaws the project.

The Forest Service wants extraordinary flexibility and discretion in applying herbicides to stem the spread of invasive weeds in northern New Mexico, despite the fact that the agency has, for decades, systematically violated environmental laws (according to whistle-blower Douglas Parker, formerly the Southwestern Region's pesticide coordinator). As these substantive comments demonstrate, the public and applicable laws demand accountability first before applying these 13 proposed herbicides. And we should all be coming together to address the root causes of the spread of invasive plants on our national forests – that, along with prevention, should be the priority.

INDIVIDUAL COMMENTERS' STATEMENTS OF REASONS OUTLINING SPECIFIC CHANGES, DISAGREEMENTS, FAILURES TO CONSIDER PREVIOUS SUBSTANTIVE COMMENTS AND VIOLATIONS OF LAW, REGULATION AND POLICY PURSUANT TO 36 C.F.R. § 215.14(6)-(9).

I. A 90-DAY EXTENSION OF THE COMMENT PERIOD IS NEEDED:

First and foremost, **we earnestly request an extension of 90 days** to more properly and thoroughly write our substantive comments. The 45-day timeframe given was unjust and inadequate for a number of reasons, including:

A. Referencing your "File Code: 1950" from the original FEIS you note: "Staying informed: Those who comment will automatically receive a copy of the final supplemental EIS and draft record of decision, both prepared after we review your comments. The record of decision will include a decision from each forest supervisor."
This did not happen, and thus delayed significantly the time that the original FEIS commenters had to comment on this DSEIS. One commenter received the documents. Most received only a form letter, and some received no letter at all. This delayed the number of days people had to respond.

B. In the DSEIS you state: "The comment period begins the day after the notice of availability appears in the Federal Register and lasts for 45 days. We expect the notice of availability to be published in the Federal Register on or around March 21, 2014. Please check the Federal Register at http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR for the exact publication date since this is the exclusive means for calculating the ending date of the comment period. If you plan on commenting, please do not rely on dates provided by any other source."

We found absolutely nothing listed about the Project under the "Forest Service" heading in the Federal Register. We reviewed all the possible dates in the Federal Register and found nothing. The assumption one would have then would be that it had not yet been published in the Federal Register. You told us that the federal register is the only source we should use, and that any other source is not reliable in determining the comment due date. Only later, after one person saw a posting in the legal notice of the Albuquerque Journal, and noted that the EPA was referenced in that posting, did we then go back to the Federal Register and find the Project listed under ENVIRONMENTAL PROTECTION AGENCY. This is a significant communication error on your part, as NOWHERE in the DSEIS or the cover letter is the EPA mentioned as the source of the Project listing. As a result, numerous days were lost by the individual commenters. Your overly burdensome expectation that you put on us caused us lost time. We expect that you will now understand why an extension of the deadline is in order. (And in the future, you need to note in the document that the Project is listed under "EPA," and not "Forest Service.")

C. The DSEIS is so incomplete as to cause us to be unable to provide thorough substantive comments at this time. An extension of time would make up for our time lost in trying to sort through what data were missing. For example, trying to determine map dates is impossible. The FEIS maps are dated, and the DSEIS maps are not dated (accidental or deliberate?). The lack of data you provide in the DSEIS does not provide us with enough information to compile thoroughly worthwhile comments within the current time frame. Thus an extension is needed, as well as the necessary data provided to us.

II. THE PROJECT VIOLATES THE NATIONAL ENVIRONMENTAL POLICY ACT:

An Environmental Impact Statement ("EIS") prepared pursuant to the National Environmental Policy Act ("NEPA") must contain a "detailed statement" of the environmental impacts associated with the proposed federal action. 42 U.S.C. § 4332 (2)(C)(i). The primary purposes of an EIS are (1) to provide decision makers with an

environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project in light of its environmental consequences, and (2) to provide the public with high quality information and an opportunity to participate in gathering information. 40 C.F.R. § 1500.1(b); *see also Baltimore Gas & Electric Co. v. NRDC* 462 U.S. 87, 97-100 (1978).

In this case, the Forest Service declined to prepare a programmatic EIS for the control of invasive plants on the Santa Fe and Carson National Forests. If that course had been followed, then less detailed site-specific analysis (Environmental Assessments) could have been prepared to address the impacts of site-specific projects. Instead, the Forest Service prepared a hybrid of the programmatic and site-specific analysis that document that suffices as neither. This DSEIS and its accompanying FEIS neither provides the decision-maker with a detailed environmental disclosure nor provides the public with the high quality information needed to evaluate environmental consequences. As documented below, such action is clearly contrary to NEPA.

A. The project fails to consider the reasonable alternative of prevention.

We made this point on appeal, and here we need to make it again, as it is not properly addressed in the DSEIS.

NEPA requires federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. §4332(2)(E); 40 C.F.R. §1508.9(b). The discussion of reasonable alternatives is the "heart" of the EIS. 40 C.F.R. §1502.14. The federal agency must take a "hard look" at alternatives, including those alternatives that emphasize different factors and lead to different results. *Citizens for Environmental Quality v. U.S.,* 731 F.Supp. 970, 989 (D. Co. 1989). The agency cannot skew the analysis by considering only alternatives that lead to its desired outcome. Id. at 990. The agency may eliminate alternatives from further consideration, but it must provide a reasonable explanation. 40 CFR §1502.14(a).

The DSEIS fails to consider the reasonable alternative of prevention. The purpose of the project is "controlling invasive plants designated by New Mexico as weeds" (FEIS, p. 13). ("The purpose and need for controlling or eradicating weed infestations on the Forests is to maintain or improve the diversity, function, and sustainability of desired native plant communities on the Forests"; "Controlling the spread of weed species is now a regional and national priority in the Forest Service...."). Prevention is widely acknowledged to be an effective means of controlling weed infestations. Nonetheless, the USFS refused to consider an alternative that contained thorough measures to prevent the spread and establishment of weeds.

The causes of weed infestation are well documented. In fact, the Forest Service published an invasive plant control DEIS in the Pacific Northwest that discussed these causes in detail. According to the DEIS, vehicles are a significant source of weed infestations. In one example, hundreds of weed seeds were found on a single car traveling on forest roads. Off- highway vehicles (OHVs) also provide an opportunity for the spread of weeds.

The potential for OHVs to spread invasive plants has been tracked by studies in Montana,

West Virginia and Wisconsin; in each case, OHVs where shown to be effective vectors of invasive plant transport and dispersal (Lacey et al 1997; Stout, 1992; Rooney). OHVs allow recreationists to travel across many more miles in a given time than they would be able to travel with non-motorized modes of transportation, greatly expanding the activity's ability to spread invasive plants from one location to another. Also, OHV use, especially "cross-country" (away from roads or designated trails) use, can create new soil and seedbed disturbances that can negatively affect the integrity of native plant communities and can favor establishment of invasive plants (Kimberling et al., 2003).

Also, oil and gas development, including the land disturbance for roads, well pads, and pipelines, and the heavy truck traffic they engender, create favorable environments for weeds. In some cases, the traffic for any one site can be hundreds of trucks, sometimes thousands, in any given week during certain stages of development.

Despite substantial evidence regarding the causes of weed infestations, the DSEIS does not discuss the issue in any detail. The DSEIS briefly acknowledges that weed infestations occur along roads and at natural gas wellheads but never discloses or discusses other causes.

Having failed to fully and thoroughly disclose the causes of weed infestation, the DSEIS then refuses to consider prevention as a viable alternative.

In several places, the DSEIS defines the project's purpose as weed control. Prevention is an obvious and reasonable approach to achieving that purpose. Prevention reduces the frequency and severity of weed infestations, including reinfestation after treatment.

The DSEIS states, "The scope of this project and NEPA decision does not extend to weed prevention" (p. 31). NEPA requires the consideration of all reasonable alternatives; there is no exception, and no apparent basis in the DSEIS, for refusing to evaluate an action that is already being done. Moreover, the claim is not supported by the record.

At most, the DSEIS supports a conclusion that the prevention activities are sporadic. For example, the only specific prevention measure mentioned is washing vehicles, and even then, the DSEIS does not say which vehicles, where, when and how. Certainly, the USFS is not monitoring all the roads and trails in the national forests, hoses at the ready. The DSEIS also suggests that some individual projects contain weed prevention measures, but it is not clear which projects, what measures and how effective.

Clearly, if the Forest Service were implementing prevention measures, they are too sporadic and weak to warrant disclosure and analysis.

Other national forests have adopted a wide range of prevention measures to control weeds, including cleaning vehicles entering the national forest, requiring certified weed-free hay for pack animals, designing projects to minimize impacts to weed-suppressing canopy-type vegetation, minimizing soil disturbance and other conditions that promote weed germination and establishment, revising grazing allotment management plans to incorporate invasive plant control measures such as closing infected pasture, designating infected pastures as unsuitable until infestations have been treated, managing the timing, duration, and intensity of grazing to maintain the vigor of native plants and retain live plant cover and litter, and restoring areas of concentrated use such as loafing and watering sites, controlling vehicle traffic through areas of known weed infestation, and enforcing OHV restrictions. The managers of these forests,

like many weed experts, understand that these measures are easier, more environmentally desirable, and more cost-effective than subsequent treatment. (see Sheley, R.L. and J.K. Petroff, editors, 1999. Biology and management of noxious rangeland weeds. Oregon State University Press, Corvallis, Oregon).

Without prevention measures, weed infestations are guaranteed to recur. In the absence of prevention, the causes of weed infestation will continue to spread weeds throughout the forests. The FEIS acknowledges this situation, observing that new weed species are expected to appear in the forests (FEIS at 14, "At the current rate of increase, several new weed species are projected to appear per year"), and that weed infestations are expected to recur and grow in size (FEIS at 14, "Weeds typically spread at a rate of between 5 and 30 percent per year, depending on the plant species and site-specific conditions").

Because prevention is a reasonable alternative to achieving weed control, both now and in the future, the Forest Service's failure to consider it violates NEPA. The USFS has a legal duty to evaluate all reasonable alternatives, and the prevention alternative satisfies the project purpose.

The decision in *Blue Mountains Biodiversity Project v. USFS,* 229 F.Supp.2d 1140 (D.Or. 2002), is directly on point. In *Blue Mountains,* the plaintiff challenged the Forest Service's failure to consider the prevention alternative to control the spread of weeds. The USFS had proposed two alternatives – one involving manual and biological treatment, and the involving other manual, biological and chemical treatment. The plaintiff argued that the agency's reliance on treatment alternatives did not comply with the requirement to consider a full range of alternatives for achieving the project. The agency responded that the prevention alternative was "outside the scope of the proposed action". The court rejected this argument, calling prevention "an obviously reasonable alternative." It found that "weed control – an explicit part of the EA's purpose – is impossible without acknowledging significant sources of weed introduction...." *Id.* at 1146. The court also observed that the agency's analysis failed to "include a meaningful consideration of prevention strategies, and the Forest Service selected a preferred alternative among two action alternatives that relied on combinations of manual and herbicidal methods for eradication – without addressing the crucial aspect of control by prevention." *See also Oregon Natural Desert Association v. Singleton,* 47 F.Supp.2d 1182, 1995 (D. Or. 1998)(BLM "cannot avoid the necessity of taking a 'hard look' at grazing in its preferred alternative by setting up two straw men for comparison," where the straw men consisted of one alternative that took no action on grazing and a second alternative that paired no grazing with recreational development on a scale incompatible with the area's designation as a wild and scenic river). As a result, the agency's "failure to address prevention in any action alternative was unreasonable and indicative of a greater failure to take a hard look and render an adequately reasoned choice." *Blue Mountains,* 229 F.Supp.2d at 1147.

This DSEIS fails for the same reason as the Forest Service's argument in *Blue Mountains.* The project's purpose is weed control, a broad objective that can be satisfied, at least in part, by proactive prevention measures. Like *Blue Mountains,* the DSEIS attempts to construe the purpose as controlling *existing* weeds, rather than all weeds, a claim that the court found to be specious. Like *Blue Mountains,* the FEIS claims that prevention is "outside the scope of the proposed action," a claim that the court also rejected. In fact, the court expressly found that prevention is "an obviously reasonable alternative" for controlling weeds on the national forests. Indeed, the FEIS acknowledges the need to treat future infestations, which by

definition will not occur unless weeds are introduced through known causes with known prevention measures. The Forest Service cannot set up straw men alternatives – no action, no herbicides, only herbicides, and the integrated approach – to avoid evaluation of prevention.

The Forest Service failed to disclose to the public its reason for establishing the geographic scope of the project as the Santa Fe and Carson National Forests. Why not New Mexico's three northern National Forests or all five? A rationale for selecting two is never presented. Since the geographic scope of the project is critical to evaluating cumulative impacts, this omission fatally flaws the analysis. In addition, the project's time frame is presented in some cases as 10 years and others as "approximately 10 years (or more)". Equivocal time limits and designation of arbitrary project boundaries are actions contrary to NEPA's requirement that EISs be properly defined. 40 C.F.R. § 1502.4(a).

Faced with a persistent gap in its understanding of herbicide behavior, the Forest Service prepared an "Herbicide Model for Watershed Analysis" that purportedly models 11 watersheds to determine the impacts of herbicide application (FEIS, p. 291, unchanged in DSEIS). However, this model is woefully inadequate, in part, because it continues to assume with no discernible basis that herbicides respond in the field as they do in the controlled conditions of a laboratory.

If the quantitative data needed to accurately evaluate site-specific impacts of herbicides on soil and water is lacking, NEPA requires disclosure of this fact. 40 C.F.R. § 1502.22. The DSEIS does not disclose this fact, instead analyzing cumulative impacts based on erroneous assumptions in violation of NEPA's requirement that analytical information must be of high quality. 40 C.F.R. § 1500.1(b).

III. THE PROJECT'S MITIGATION MEASURES, AKA "DESIGN FEATURES," ARE NOT SUPPORTED BY ANALYTICAL DATA:

An EIS is not complete unless it contains "a reasonably complete discussion of possible mitigation measures." *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 352, 109 S.Ct. 1835, 104 L.Ed.2d 351 (1989). ("[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the "action-forcing" function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects."). This requirement is implicit in NEPA's demand that an EIS discuss " 'any adverse environmental effects which cannot be avoided should the proposal be implemented.' " Id. at 351-52, 109 S.Ct. at 1835 (quoting NEPA, 42 U.S.C. § 4332(C)(ii)).

The agency must analyze mitigation measures or "design features" in detail and explain their effectiveness. *Northwest Indian Cemetery Protective Ass'n v. Peterson,* 795 F.2d 688, 697 (9th Cir.1986), rev'd on other grounds, *Lyng v. Northwest Indian Cemetery Protective Ass'n,* 485 U.S. 439, 108 S.Ct. 1319, 99 L.Ed.2d 534 (1988). "A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." Id. Instead, mitigation measures should be supported by analytical data. *Idaho Sporting Congress v. Thomas,* 137 F.3d 1146, 1151 (9th Cir.1998). In other words, mitigation measures must be analyzed in detail and must explain their effectiveness in mitigating adverse environmental

impacts. Without analytical data to support this analysis and explanation, the mitigation measures/design features amount to nothing more than a "mere listing" of good management practices.

IV. THE PROJECT DOES NOT MEET NEPA'S STANDARD FOR HIGH QUALITY SCIENTIFIC INFORMATION:

The scientific information presented in NEPA documents "must be of high quality" because "accurate scientific analysis [is] essential to implementing NEPA." 40 C.F.R. § 1500.1 (b). The FEIS's appendix 5 (unchanged in the DSEIS) presents a theoretical model of 11 watersheds on the two forests purportedly showing that the project's use of herbicides will not harm aquatic species or water quality. The results of this modeling exercise are further used to justify the removal of thresholds that would trigger further analysis (FEIS, p. 342).

The critical assumptions of this analytical model are: 1) unsubstantiated by appropriate research or practical literature; 2) contain numerous questions which cannot be answered from information presented in the FEIS; 3) lacks the quality necessary for critical examination; and 4) as used in the FEIS, is non-empirical and hence not of high scientific quality. Attachment 8 (project record, original FEIS) is a critique of the watershed model prepared by Dr. Kim Kirkpatrick.

V. THE PROJECT VIOLATES THE NATIONAL FOREST MANAGEMENT ACT:

The National Forest Management Act ("NFMA") is designed to provide a "comprehensive framework for the development and implementation of [forest] Management Plans," consistent with the principles of multiple-use and sustained yield. S. Rep. No. 94-893, 94th Cong., 2d Sess. at 8, 20 (1976). The Forest Service is required by both NFMA and its own implementing regulations to follow the standards and guidelines established by the Forest Plans: "Resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans." NFMA at 16 U.S.C. § 1604(i); regulations at 36 C.F.R. § 219.10 (e), (i). The courts have repeatedly affirmed this fundamental requirement. See *Neighbors of Cuddy Mountain v. USFS,* 137 F.3d 1372, 1377-78 (9th Cir. 1998); *Pacific Rivers Council v. Thomas* 30 F.3d 1052 (9th Cir. 1994); *Idaho Conservation League v. Mumma.* 956 F.2d 1512 (9th Cir. 1992).

NFMA also imposes on the Forest Service a substantive duty to protect the diversity of plant and animal communities on national forests. 16 U.S.C. § 1604(g)(3). To achieve this goal, the NMFA regulations require the Forest Service to ensure that viable populations of native animals are maintained by monitoring the impacts of the Forest Plans on selected management indicator species("MIS").1 36C.F.R.§219.19(a)(6).The monitoring regime called for by the regulations is rigorous and comprehensive, mandating that hard quantitative population data be acquired and analyzed to determine MIS population trends. 36 C.F.R. 219.26. 21

Before approving a site-specific project the Forest Service must gather population data for MIS and analyze MIS population within the project area. *Forest Guardians v. Forest Service,*

180 F.Supp.2d at 1280, 1282; *Utah Environmental Congress v. Zieroth,* 190 F.Supp.2d at 1270, n. 1; *Colorado Wild v. U.S. Forest Service,* 2004 WL 232747 (D. Colo. Jan. 30, 2004); *Utah Environmental Congress v. Bosworth,* No. 03-4080 at 10 (10th Cir. 2004). Further, the Forest Service cannot rely on habitat availability and habitat trends as a substitute for actual quantitative data. *Sierra Club v. Martin,* 168 F.3d at 7 (11th Cir. 1999); *Forest Guardians,* 180 F.Supp.2d at 1282; *Sierra Club v. Glickman,* 974 F.Supp. 905, 936 (E.D. Tex. 1997); *Zieroth,* 190 F.Supp.2d; *Utah Environmental Congress,* No. 03-4080 at 14 (10th Cir. 2004).

Both the Carson and Santa Fe Forest Plans obligate the Forest Service to monitor the populations1. A viable population is defined as one that has the estimated numbers and distribution of reproductive individuals to ensure its continued existence is well distributed in the planning area. Management indicator species are surrogates for a broad range of other species that have similar needs. 2 This duty to monitor is non-discretionary. "Population trends of management indicator species *will* be monitored." 36 C.F.R. 219.19(a)(6) (emphasis added).

VI. THE PROJECT VIOLATES THE FOOD QUALITY PROTECTION ACT:

The Food Quality Protection Act of 1996 ("FQPA"), Public Law No. 104-170, 110 Stat. 1489, 21 U.S.C. § 346a, mandates a more rigorous analysis of the potential impacts of herbicides than performed in the Forest Service risk assessment. FQPA expands the definition of risk to a more realistic standard given the abundances of chemicals that citizens are exposed to on a daily basis. For example, FQPA mandates an analysis that considers risk both from a specific chemical and the expected cumulative exposure to groups of chemicals. FQPA also establishes specific requirements for assessing the exposure risks to infants and children.

The Administrator shall assess the risk of the pesticide chemical residue based upon available information concerning the cumulative effects on infants and children of such residues and other substances that have a common mechanism of toxicity.

FQPA Sec. 408(6b)(2C)(III). All previously registered chemicals must be reanalyzed under these stricter FQPA guidelines. The Forest Service is now required to assess the aggregate exposure to the same pesticide across different routes and, at the same time, to other pesticides (including herbicides) that have a common toxicity mechanism. Because the Forest Service has not met this new standard for risk assessment – in fact, it was not even mentioned in the FEIS - the agency needlessly endangers human health in violation of FQPA.

VII. THE PROJECT VIOLATES THE ENDANGERED SPECIES ACT:

The Forest Service Biological Assessment and Evaluation ("BAE") and the U.S. Fish and Wildlife Service (FWS) concurrence do not and cannot comply with the Endangered Species Act for two primary reasons. First, ESA consultations on herbicide use are flawed given that the FWS has never consulted over the registration and re-registration of pesticides. In this case, the FWS has de-facto unilaterally permitted the use of toxic pesticides without first ensuring, through the ESA consultation process, that those uses will not jeopardize endangered species' survival or destroy their critical habitat. This procedural and substantive

flaw is a fatal one to the use of any herbicide in the habitat of listed species. Moreover, the limited, cursory analysis provided in the Biological Assessment is not an adequate substitute, even if procedurally the agency chose to substitute it for the required and missing consultation on the registration and general use of each individual herbicide.

Second, the Forest Service BAE is substantively flawed for numerous reasons detailed below, including that it does not adequately discuss synergistic effects, fails to protect potential habitat of severely jeopardized species and grossly miscalculates the effects of pesticides on listed species.

Herbicide use does not comply with the Endangered Species Act because the EPA has never examined the effects of new and pre-existing herbicide registrations on newly listed species.

The core mandate of § 7(a)(2) of the ESA is clear: "Each Federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior or Commerce], insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat . . .. 16 U.S.C. § 1536(a)(2). An agency's duty to consult under this provision is triggered whenever it is determined that an action "may affect" a threatened or endangered species. 16 U.S.C. § 1536(a)(3); 50 C.F.R. § 402.12. Where such a determination has been made, an agency may satisfy its duty to avoid jeopardy or adverse modification by conforming its action to a biological opinion issued by the FWS following formal consultation, and by fully complying with any reasonable and prudent alternatives and measures set forth in such biological opinion.

The EPA's rampant ESA violations relating to its pesticide registration program have been the subject of numerous recent lawsuits. See for example *Washington Toxics Coalition v. EPA,* No. C01-132C. Though there are many flaws in the EPA's ESA consultation process that are relevant to the Forest Service's proposed action, this case focuses on two primary flaws: a failure to re-initiate consultation on newly listed species and a failure to initiate consultation on newly registered pesticides.

Only the EPA's use and registration of picloram has undergone formal ESA consultation. However, as is detailed below, the mandatory directions that were the outcome of that consultation are not being followed and the EPA has never re-consulted to address the effects of picloram on newly listed species.

Section 7(a)(2) mandates the EPA to ensure that its actions will not jeopardize the continued existence of listed species. In this particular case, the EPA has not adequately discharged its Section 7 obligations because it has not consulted on the effects of individual pesticide registrations on the ESA listed Southwestern willow flycatcher, Mexican spotted owl, Mexican spotted owl critical habitat, Rio Grande silvery minnow, Bald eagle, and the Holy Ghost Ipomopsis.

The failure to initiate consultation on pesticide registration is relevant because the EPA pesticide approval and registration process is so heavily politicized that the process often does not even provide the FWS with adequate information upon which to formulate a biological opinion. In numerous cases involving some of the same pesticides at issue here, the FWS elsewhere in the western United States identified deficiencies in EPA's risk assessments that

made it impossible to fulfill the section 7(a)(2) mandate. (See *Washington Toxics Coalition)*

As a result of *Washington Toxics Coalition,* the FWS and EPA engaged in focused discussions over EPA's consultation duties. In part, as a result of that conversation the FWS came to the conclusion that the "EPA's current pesticide registration process does not produce adequate information to evaluate the effects of pesticide registration and use on listed species."

Accordingly, FWS concluded that "EPA's pesticide registration process needs to be modified to generate the appropriate information to determine the effects of their actions." Not surprisingly, when FWS identified the need for fundamental changes in the pesticide registration process the focused discussions came to an abrupt conclusion.

What is fundamentally different about the factual circumstances surrounding the proposed application of herbicides on the Carson and Santa Fe national forests that are most relevant to the adequacy of the ESA consultation on the proposed action is that the EPA does not even have partial information on the effects of many of these pesticides on listed species. The EPA simply has never engaged in a formal ESA consultation on these species. Thus, conclusions by the FWS and Forest Service that the proposed use of the various toxic pesticides will not be harmful to listed species are not based on the best available science.

In this case, the best available science has never been applied because the ESA Section 7 consultation on the pesticide registration never occurred. The registration process itself, though perhaps adequate to discharge EPA's responsibility under other environmental laws, is sufficiently flawed to prevent the EPA from discharging its legal obligation under the ESA. We believe that because the current Forest Service action and ESA consultation must necessarily be tiered to, and rest upon the foundation of an adequate consultation on the pesticide registration itself, that the current Forest Service consultation is arbitrary and capricious.

Moreover, because the FWS has never adequately consulted on the use of all of these pesticides at the time each is registered neither the Forest Service nor the FWS nor the general public can be sure that EPA label requirements are adequate to prevent "take" of listed species or cause jeopardy to listed species. Restrictions on use identified on the label are one of the primary methods by which the EPA and FWS can ensure that a toxic pesticide, once approved, does not "take" or cause jeopardy to a listed species. The inadequacies of the labels in terms of being adequately protective of ESA listed species are especially relevant given that both the Forest Service and FWS mitigation measures require strict adherence to "all EPA label requirements."

The use of pesticide labels to ensure protection is critical but it is not the only way that the EPA has worked in the past to ensure that pesticides do not jeopardize listed species. In fact, the most recent EPA consultations, which date from 1989 and 1993, that are relevant to the Forest Service's proposed action, also require the use of bulletin restrictions.

For those pesticides that were the subject of a "jeopardy call," because of their effects on one or more species and/or their designated critical habitats, the FWS developed Reasonable and Prudent Alternatives ("RPAs"), and incorporated those RPAs into a June 14, 1989 Biological Opinion. For the most part, the RPAs required the EPA to implement a program of labeling

and bulletin restrictions that imposed limitations on pesticide application within certain specified zones. However, in most of the states that comprise the ranges of the above listed species, the EPA has not implemented the labeling and bulletin restriction program required by the RPAs. Again, given the Forest Service and FWS reliance on EPA labeling and bulletin requirements that have never been met, we believe the current consultation does not adequately comply with Section 7.

Equally relevant are other conditions included in the June 14, 1989 Biological Opinion necessary to avoid violations of Section 9 of the ESA. In the June 14, 1989 Biological Opinion, the USFWS also determined that the EPA's registration of numerous pesticides would cause the "take" of many species listed under the ESA at that point in time. As conditions of incidental take permits excusing this take from the prohibitions of Section 9, the FWS required the implementation of four mandatory Reasonable and Prudent Measures ("RPMs"). The four RPMs set out in the June 14, 1989 Biological Opinion require the EPA: 1) to establish buffer zones adjacent to species habitat; 2) to modify pesticide application practices; 3) to establish a pesticide user program and 4) to establish a Federal or State endangered species protection plan. The EPA has never fully implemented these mandatory RPMs in the range of the species that were listed under the ESA at the time, many of which have habitat in New Mexico.

The Forest Service BAE fails to adequately discuss potential impacts of toxic herbicide applications as well as the current status of listed species, making its "likely to adversely affect" findings illegal.

We believe the ESA consultation on the proposed action is inadequate for a variety of reasons. As a general matter, given the absence of a complete and thorough analysis of the behavior and effects of these pesticides at the time of registration, we believe the Forest Service and FWS determinations of effect are inadequate.

VIII. RESEARCH CITED IS WOEFULLY OUTDATED, AND 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, there is a 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/drugscolombia-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, 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]* that has not been considered.

The research listed directly above is just a sample of currently available research that contradicts DSEIS analysis of risk and harm. Dozens of other papers are available from peer-reviewed journals and government sources (including the USFS) within the US and abroad. The research published in these papers and peer-reviewed journals 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/) 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, and we are shocked by how outdated the DSEIS herbicide research is. Cursory attempts were made to appear as if updates were made to the research, but this is absolutely not the case. This is a significant flaw in the DSEIS that must be addressed.

IX. CUMULATIVE EFFECTS NOT ADDRESSED:

Previous appellants on the FEIS requested that the USFS address the concern of cumulative effects (project record). The DSEIS does include a section with this topic but includes statements such as "risk of exposure [to wildlife] is immeasureable" so "cumulate effect cannot be measured" but "unforeseen accidents expected" (p. 40). We propose that this immeasurable risk is *too much* risk and should either be soundly measured or this alternative should be rejected, based in part, but not solely, on the basis of the precautionary principle.

X. INADEQUATE MITIGATION:

For instance, a statement is made in the FEIS: "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" (p. 167). 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, DEIS, 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 the range from sensitive to 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 with could result in methemoglobinemia. Therefore we consider the mitigation proposed by the USFS to be inadequate and request further efforts.

XI. NEW RESEARCH FOR MOBILITY OF HERBICIDES & THE ROLE OF SURFACTANTS IS NOT INCLUDED:

We request that new information be considered regarding the mobility of herbicides in soils as outlined in the DSEIS/FEIS (p.116) and the impact of surfactants or inert ingredients (p.165) on toxicity. 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 ability to assess the inert ingredients and surfactants due to their proprietary nature. We therefore request that the USFS consider this new information when considering environmental and health impacts. Hartzler, B. (2003). "Role of spray adjuvants with postemergence herbicides." *Iowa State University.* 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/drugscolombia-docs/healthenvironment.pdf Tenenbaum, D. (May 2002). "Coca-Killing Controversy." *Environmental Health Perspectives.* 110: A236. 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

XII. BIOLOGISTS "CAN" & "OTHER QUALIFIED PERSON":

We wish to draw attention to page 24 of the 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?

XIII. DISCREPANCY IN MAPS & AVAILABLE DATA:

We would like to point out that maps in the DSEIS are not dated; but they were in the FEIS. Why the discrepancy? We find this quite peculiar. And that change (date removal) is not noted as a change in the DSEIS. We request that all maps include dates of data collected. This is critical for us to do a proper analysis of the DSEIS.

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 these data and request more information be disclosed to the public.

XIV. 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 (DSEIS, p. 117), 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 revegetation potential tend to already have low

hydrologic integrity.
(http://age-web.nmsu.edu/saltcedar/Restoration%20in%20the%20Southwest.htm)

We therefore demand more attend be paid to mitigation efforts and find that the current mitigation techniques proposed are inadequate or non-existent. 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.

XV. 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?)*

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 B be used; and it can be argued that the use of herbicides is not a "preservation" of nature, not is it spiritually inspiring. The impact on scenic views may be negligible. The recreational value is further addressed when the USFS admits on page 137 of the DSEIS 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 (HIA) or other evaluation of what the publicly held wilderness values *are* that the USFS claims will not be seriously adversely effected.

XVI. 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)

We request that the impact and safety of AMPA be evaluated before herbicides are used.

XVII. AMERICAN PIKA IMPACTS:

The American Pika has been sighted in areas not previously listed, hence more studies are needed to determine the claim that there will be no disruption to the American Pika. Also where will funding come from to do such studies? Sightings of American Pika have been confirmed by individuals in areas not currently listed as known habitat (see American Pika photos below, taken at Serpent Lake in 2012). 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 the USFS consider the impact of the cost of such surveying on the economical viability of the Alternatives.

Additionally, it is stated on page 81 of the DSEIS that the 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 plants palatable to the Pika and will therefore pose a threat to sensitive, threatened and endangered species.

AMERICAN PIKA, Serpent Lake, 2012:

AMERICAN PIKA, Serpent Lake, 2012:

And what of the small bodies of water like this – the Pika's watering hole? How is this species to be protected from ingesting herbicides? "No increase in weeds and therefore no decrease in grasses are expected within [the pika] habitat." Not only is that not backed up by science, but it's not even logical. Since their populations are not properly mapped, and since the DSEIS provides no documentation or even logic re: the pika's proposed food supply, this species is at risk due to the Project's Alternative B. The same can be said for the Goat Peak Pika.

The American Pika is now being seen in areas not previously listed. More studies are needed. Who will fund those studies? In the above recent photos, taken by Cynthia Riley (one of our individual commenters listed here), these American Pika were spotted at Serpent Lake. It is woefully inadequate to simply say, as the DSEIS states on p. 81, "no disturbance to the pika from treatments is expected. Weeds are generally not consumed by the pika." Also, with 2,4-D consuming all plants as it is nonspecific, protection of the Pika food supply will be negatively impacted. And with 2,4-D increasing palatability of plants, and as the normal food supply decreases, this increases the poison risk to the Pika.

And in the FS own words: "Analyses suggest that both chronic stresses (average temperature during all of summer, snowpack and growing-season precipitation), acute (hot and cold) temperature stresses, and vegetation productivity may all be playing a role in pika declines in the Basin over the last decades." (http://www.fs.fed.us/ccrc/topics/wildlife/mammals/)

Will there be carcass searches as part of the follow-up protocol, e.g., for at least 14 days depending on the species? Herbicide applications are frequently being delayed now due to decreased assurance of the timing of the hibernation period for multiple species, including the meadow jumping mouse. (e.g., http://www.pesticides.montana.edu/Present/Environmental/Anticoagulants%20training%20August%202013%20[Compatibility%20Mode].pdf)

XVIII. NO CONSIDERATION FOR CLIMATE CHANGE FACTORS, INCLUDING THOSE ALREADY DOCUMENTED AS AFFECTED (E.G., HIBERNATION):

In the DSEIS, the NM meadow jumping mouse "hibernates below ground for nearly 9 months and emerges in July" (DSEIS, p. 82). The FS is counting on this as fact, and will apply herbicides according to this schedule. But this schedule no longer applies due to the effects of climate change.

Hibernation periods become shorter and shorter, and there has been no consideration for this or other climate change factors in this DSEIS. This is a significant flaw that must be addressed.

"Termination of hibernation is highly sensitive to temperature change. In fact, current global upward trends in ambient temperature are having a measurable effect in shortening the hibernation seasons of a number of species…"
(http://labspace.open.ac.uk/file.php/5850/!via/oucontent/course/338/s324_4_bk2_ch4.pdf)
(http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3894896/)

Elsewhere, but not in this DSEIS, the USFS admits: "Climate change is affecting altitudinal migrants and hibernating species" (http://www.fs.fed.us/ccrc/topics/wildlife/mammals/).

THERE IS NO CONSIDERATION FOR the effects of climate change in this Project. Yes, the USFS themselves say, "Diverse landscapes increase overall resilience and provide

opportunities for adaptation. Lastly, because climate change will lead to many unexpected ecological effects, systems must be in place to rapidly identify and monitor these effects and facilitate appropriate management responses."
(http://www.fs.fed.us/ccrc/topics/wildlife/mammals/)

Not only does the Project decrease landscape diversity, but it fails utterly in its "design features" to "rapidly identify and monitor climate change effects, but there is no facilitation plan for appropriate management responses." The USFS needs to take its own advice, and in the meantime, this DSEIS is extremely inadequate in protecting almost all aspects of the environment in both national forests.

XIV. SIGNIFICANT CONFUSION CAUSED BY USFS HAS LED TO MISTRUST, AND QUESTIONS REMAINS UNANSWERED:

Under the original FEIS, the Deputy Regional Forester at the time reversed the Record of Decision in 2006, in part because, as she stated, "evaluation and documentation of environmental cumulative effects…with specific attention to wildlife species…" was incomplete. She continued: "…the concern from the New Mexico Environment Department…regarding the use of picloram in the municipal watersheds needs to be addressed."

The DSEIS did not fully disclose under what guidelines the FS has been managing the invasive plants since that time. Specifically what measures have been used in the past 8-10 years since the ROD reversal, and where? If noxious plants were such a problem back in 2004 when the FEIS came out, how and where has the FS been addressing the problem in the meantime while the DSEIS was being written? Was the problem ignored? Was a non-chemical approach used? If so, how successful was it? If successful, why not continue with a non-herbicide approach? Was the herbicide ban lifted without the affected communities being informed, including the City of Las Vegas which passed a resolution in 2006 in strong opposition to the FEIS, including herbicides in the Gallinas Watershed? Though general comments were made (nearly identical to the FEIS), no specific explanation was presented in the DSEIS.

An article, published in the *Las Vegas Optic*, on January 19th, 2006, under the headline 'Council rejects herbicide plan – Forest Service says weeds not a problem now' continues to confuse our community:

EXCERPT: " Two Forest Service Officials – Joe Reddan and Dolores Maese – were on hand to defend the agency's plan. They distributed a letter from Clifford Dils, acting forest supervisor for the Santa Fe National Forest. The letter states that the agency has found no noxious weeds or invasive plants in the Gallinas Watershed part of the forest." (Las Vegas Optic, Jan. 19, 2006).

Why then was the Gallinas Watershed on the list for herbicide applications if, as the FS later admitted, they found no invasive plants up there?

In the FEIS (p. 64), past and present ongoing weed treatments in the forest are mentioned, but no dates are given, it does not say whether those treatments are ongoing or not, it does not say if the FS violated the ban on herbicide use in the Santa Fe National Forest. And what of the riparian areas? So many questions are left unanswered in this woefully inadequate DSEIS.

Thank you for your time. Please let us know if an extension will be granted for public comment on this DSEIS.

Respectfully submitted,

Patricia A. Leahan and Kathryn Mahan, and the other Individual Commenters listed above

(NOTE: We are not members of any mutual organization, but rather individual concerned community members who came together solely to research, write and submit these comments – a common and accepted practice among the resource-limited rural areas of northern NM.)

REFERENCES (IN ADDITION TO THOSE EMBEDDED IN THE COMMENTS ABOVE):

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