



Sawtooth Forest Supervisor's Office
Attn: Invasive Species Project
2647 Kimberly Road East
Twin Falls, ID 83301

comments-intermttn-sawtooth@fs.fed.us

August 10, 2015

RE: Idaho Conservation League scoping comments on the Boise & Sawtooth Forests' Invasive Plant Treatment proposal

Dear Kit and Carol,

Thank you for considering our scoping comments on the Boise & Sawtooth Forests' Invasive Plant Treatment proposal. Since 1973, the Idaho Conservation League has been Idaho's voice for clean water, clean air and wilderness—values that are the foundation for Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through public education, outreach, advocacy and policy development. As Idaho's largest state-based conservation organization, we represent over 25,000 supporters who have a deep personal interest in protecting public lands from noxious weed infestations and restoring native plant communities.

We commend the efforts the Forest Service is taking to efficiently address the growing problem of invasive species outcompeting native species across the forests of Idaho. Invasive weeds pose a serious threat to the ecological integrity of public lands, and we recognize the need to prevent or control their spread across the western U.S. However, we believe that the USFS should do more to address the root of the problem. While treatment is an important aspect of this project, the USFS should prioritize efforts to prevent the initial introduction, disturbance of soils, and vectors for the spread of weeds into the area. In particular, we believe that more should be done to address major causes of the spread of noxious weeds such as high road densities, overgrazing, soil disturbance from vegetation management, and irresponsible OHV use.

Additionally, although we support the judicious use of herbicides where safe and appropriate, we are concerned about potential adverse effects of drift occurring as a result of application. In particular, we are concerned about the effect of aerial spraying on aquatic environments, particularly on small streams and other shallow water bodies. We are also concerned about potential impacts to non-target plant species as a result of drift, misapplication, mishandling,

improper storage or other potentially unforeseen complications.

In response to our significant concerns surrounding aerial application, we strongly encourage the USFS to consider adopting an alternative that prohibits aerial application and strictly limits the use of ground-based broadcast application in areas adjacent to water bodies, including wetlands, streams, rivers, ponds, lakes or other riparian areas.

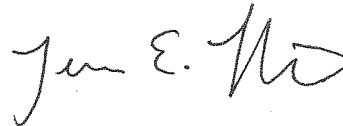
Finally, please review and consider each of the attachments to these comments. If you have any difficulty opening the attachments, please contact us and we will work with you to ensure that you can open and review the attachments in full to ensure their timely delivery and review.

Once again we thank you for the opportunity to submit comments on this project. Please keep us on the mailing list for this project and all projects on the Sawtooth and Boise National Forests. Feel free to contact me if you have any questions or require additional information.

Sincerely,



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Attachments: References

Idaho Conservation League Comments on the
Boise & Sawtooth Forests' Invasive Plant Treatment proposal

Purpose and Need for Action

We believe that the USFS should take a strong leadership role in the proactive management of noxious and invasive weeds. The most effective way to do so is to focus on prevention by aggressively addressing root causes of noxious, non-native and/or invasive weed dispersal. The USFS lists preventing the spread of invasive weeds as the “first line of defense” yet the proposal does not list prevention as a treatment method. Rather, the proposal focuses exclusively on reactive methods such as herbicide application, fire use, mechanical and manual treatments, and biological controls. Simply treating current infestations of weeds does little to prevent future problems and ensures that the cycle of treatment and infestation will continue into the foreseeable future. The USFS needs to consider alternatives that more directly and more aggressively seek to reduce activities that contribute to the spread of noxious weeds such as roads, irresponsible OHV use, and grazing. Though we appreciate the USFS's duty to manage public lands for multiple uses including grazing, OHV use, and resource development, we believe the USFS can and should do much more to promote more responsible use and address the root causes that lead to the establishment and spread of non-native, invasive and/or noxious weeds.

Roads

There is a strong correlation between roads/vehicular traffic and noxious weed infestations. According to numerous sources and studies, roads, trails, and their accompanying motorized users are primary conduits for noxious weed transport and establishment. In addition, a recent study shows that, contrary to popular belief, improved roads accelerate noxious weed expansion significantly more than primitive ones, while unroaded areas act as strongholds for native species against invasion.¹ We are particularly concerned with the practice of building temporary roads for logging activities or for the construction of fence lines, which have a tendency to become travel corridors and vectors for the spread of noxious weeds. We encourage the USFS to utilize existing transportation systems for project activities whenever possible.

Additionally, the proposal should consider road decommissioning as an effective way of reducing noxious weed invasions and recovering native ecosystems. The proposal should include a road density analysis, which identifies unclassified, high-risk, and low-use roads that could feasibly be decommissioned and obliterated.

OHVs

OHVs act as major vectors for the spread of weeds both by carrying seeds of invasive species throughout USFS lands and by promoting the establishment of these species by disturbing soil. The USFS should coordinate with the Idaho Department of Parks and Recreation, and local Cooperative Weed Management Agencies regarding options for the prevention and control of illegal and irresponsible OHV use. The proposal needs to include an analysis of the contribution of cross-country OHV use to the spread of weeds. Managers should recognize

¹ Gelbard, J.L. and Belnap, J. Roads as Conduits for Exotic Plant Invasions in a Semiarid Landscape. *Conservation Biology* 17(2):420-432.

which species of noxious weeds are spread by OHVs and which species take advantage of OHV-disturbed trails.

The USFS should strictly enforce OHV regulations and initiate an aggressive campaign encouraging responsible use. As part of this decision, the USFS should encourage OHV users to clean off their vehicles at car washes before and after use. Signs identifying weeds should be posted at the trailheads. The USFS should work with OHV clubs on an integrated weed control program in which club members hand pull weeds before they seed, similar to the “Adopt a Highway” program.

Grazing

Livestock are significant vectors of weed establishment and spread. Livestock can transport weed seeds in their hooves and hides as well as in their digestive tract. In addition, overgrazed areas are significantly more susceptible to weed invasion. The proposal fails to recognize the relationship between livestock grazing and the spread of weeds, and the alternatives provided include no measures to control and prevent infestations related to grazing activities.

The USFS needs to assess the role that overgrazing has played in weed expansion and assess different management strategies to reduce this threat. Specifically, the USFS should analyze how changing the frequency and intensity of grazing will affect weed spread and native species restoration. The mechanisms to be utilized include the revision of permits, allotment management plans, and annual operating instructions.

The EIS should also analyze and implement an alternative that requires stock users to feed their livestock with certified weed-free feed. Star thistle, spotted knapweed and many other weeds are often observed along even the most remote backcountry trails because of livestock feed containing the seeds of weeds and invasive plants. Addressing and controlling the spread of weeds in backcountry locations can be costly and time consuming. Instead, proactive strategies are warranted.

Information should be posted at all trailheads and available at USFS offices informing livestock users of this requirement. Although the USFS cannot patrol feeding habitats on farms and ranches, livestock users should be asked to corral and begin feeding their animals with certified weed-free feed several days prior to entering public lands. The USFS website, pamphlets, fliers, and trailhead information should ask that livestock users corral their stock at least three days prior to their trip and begin feeding certified weed-free feed at that time. This will allow sufficient time for any non weed-free forage or feed to pass through the digestive tracts of their stock prior to entering public lands.

In addition, the USFS should work with ranchers to limit livestock grazing in weed-infested areas during flowering and seeding periods. The USFS should also require permittees to transport livestock to a holding area for 14 days after grazing in weed-infested zones before moving to weed-free rangeland. Again, weed management campaigns should be used to inform ranchers and range users on how to limit spread.

Guides & Outfitters

Guides and outfitters will also play an integral role in efforts that minimize, contain, or reduce weeds and invasive plants. A condition of being granted a permit for outfitters and guides should require that they practice methods that contribute to this effort. Hunting outfitters that use stock animals should also be required to use certified weed-free feed for livestock. Similarly, all outfitting and guiding equipment should be cleaned prior to entering the public lands.

Cumulative Impacts

The USFS must also analyze and disclose the direct and indirect cumulative effects of this project in conjunction with all past, present and reasonably foreseeable future actions. We are concerned about weed treatments negatively impacting water and wildlife, and the potential for future management implications.

Fire Use

We support the careful use of fire to manage weed infestations so long as it is used to reestablish historic fire regimes and it is accompanied by the replanting of native vegetation. Disturbance from fire can serve as a vector for the spread of certain weeds. The use of fire thus also needs to be accompanied by a strict monitoring program designed to ensure the rapid detection and containment of noxious and invasive weed species in order to ensure reinfestation.

Mechanical Treatment

We generally support the use of mechanical treatments, but encourage the USFS to utilize these treatments thoughtfully. The timing and duration of mechanical treatments will be crucial to their success. For instance, some treatments may need to occur annually for a period of several years in order to prevent the re-infestation of certain noxious weed species. Mechanical treatments in Recommended Wilderness Areas or other special designations may be more controversial and prevention should be emphasized in these locations.

Herbicide Application

Because of the serious ecological damage caused by weeds, we support the judicious use of herbicides when careful analysis demonstrates its propriety on a site-specific basis. However, the environmental costs of herbicide use must always be carefully weighed against the benefits in light of alternative methods of weed control and prevention. The burden rests on the USFS to demonstrate, via analyses of the characteristics of specific herbicides as well as site conditions and weather patterns, that proposed herbicide application treatments will not adversely impact non-target species or overall ecosystem integrity. Non-herbicide treatments and prevention techniques should be utilized in situations where herbicide application may result in unintended harm; for instance, when sensitive plant species are present. If this is not feasible the USFS should reconsider proposed buffer zones and application methods. Aerial application should be avoided altogether, and buffer zones adjusted for different ground applications.²

Although we recognize that aerial applications may be more economical in some areas, we strongly encourage the USFS to consider an alternative that does not involve using aerial

² Hartzler, Robert and Hornstein, Joyce. Protecting Iowa's Rare and Endangered Plants (2003). Iowa State University Extension Services. <http://store.extension.iastate.edu/Product/Protecting-Iowas-Rare-and-Endangered-Plants>. Accessed 4 Aug. 2015.

applications. In particular, we are concerned about the potential introduction into sensitive areas, including riparian and aquatic environments, and/or non-target locations. The USFS should also avoid aerial or broadcast applications in riparian areas, including those that contain critical habitat for threatened and endangered fish species. Amphibians are also extremely sensitive to herbicides, even at relatively low levels. The proposal needs to analyze potential impacts to amphibians and associated species from the use of these herbicides.

We also have concerns with the use of, and application setting of, the following herbicides (irregardless of application method):

- 2,4-D amine – Capable of accumulating in fish species even at low concentrations.³ We urge to USFS to utilize other weed control measures in riparian areas before applying 2,4-D amine.
- Glyphosate – It is important for the USFS to specify what formulation(s) of glyphosate will be used, especially in relation to aquatic and riparian applications.
- Imazapyr – Due to risk of runoff or over-application, we encourage the USFS to apply imazapyr judiciously so as not to negatively affect nearby native plants.⁴

Again, the USFS must identify the cumulative effects of herbicide *mixtures* applied concurrently with other treatments, herbicide applications used in the past, and herbicide applications that will be used in reasonably foreseeable future actions.

Aerial Application

As noted above, we have serious concerns about the adverse impacts of aerial herbicide application on aquatic environments, particularly over smaller streams and intermittent channels. Furthermore, it is entirely unclear how the USFS might prevent contamination to streams via wind drift even with buffer zones, particularly since the elevation of spraying will vary.

Typical estimates of pesticide drift following aerial application range from 100 meters (330 feet) to 1600 meters (5250 feet).⁵ In a summary of 16 studies on drift compiled by Northwest Coalition for Alternatives to Pesticides, chemicals were detected as far away from the application as samples were taken, so these numbers cannot give a definite answer to the question of how far pesticides can drift. Drift does occur over much greater distances than anticipated. For example, cool-air-drainage conditions carried forestry applications of the insecticides orthene and trichlorfon over 1.25 miles in Washington's Cascade Mountains.⁶ Moderate winds carried carbaryl over 2 miles from a Vermont apple orchard.⁷ Using a fluorescent tracer, drift was

³ Tu, Mandy; Hurd, Callie; Randall John M. Weed Control Methods Handbook (2001). The Nature Conservancy. <http://www.invasive.org/gist/handbook.html>. Accessed 6 Aug. 2015.

⁴ Ibid.

⁵ Crabbe, R.S. 1984. Effect of atmospheric turbulence on windborne drift of aerial forest sprays. In P.W. Voisey, (ed.) *Proc. symposium on the future role of aviation in agriculture*. National Research Council of Canada.

⁶ Markin, G.P. 1982. Drift of insecticidal spray by cold air drainage winds in western mountains. Research Note PSW-360. Berkeley, CA: U.S. Dept. of Agriculture. Forest Service. Pacific Southwest Forest and Range Experiment Station.

⁷ Currier, W.W., G.B. Maccollom, and G.L. Baumann. 1982. Drift residues of air-applied carbaryl in an orchard environment. *J. Econ. Entomol.* 75:1062-1068.

measured 4 miles from an insecticide application on a California oat field.⁸ From Colorado wheat fields during hot weather, 2,4-D and dicamba drifted between 5 and 10 miles.⁹ In central Washington, winds and hilly terrain combine to cause 2,4-D to drift for 10 to 50 miles and Paraquat to drift for up to 20 miles.¹⁰

The combination of the risk of environmental effects, along with the potential for drift poses a threat to clean water, wildlife and native species on USFS and adjacent lands within the operating area. As a result, any application should be limited to ground-based spraying through the use of backpack sprayers or ATV-mounted sprayers. Even these application methods should be limited in sensitive areas (riparian zones, Threatened, Endangered and Sensitive plant species habitat, etc.).

Threatened, Endangered & Sensitive Species

The USFS should consider the uncertainties surrounding the effects of herbicides on wildlife and native plants, especially those listed as Threatened, Endangered, and/or Sensitive (TES) species. For instance, the EPA has announced it will be conducting a long-term study on the effects of glyphosate and other herbicides on TES species.¹¹

While the USFS stated it would not conduct aerial herbicide spraying in known greater sage-grouse nesting/early brood-rearing habitat, research has shown that chicks are vulnerable to starvation in late brood-rearing as well. The use of herbicides may diminish important food sources, such as forbs and insects.¹² We ask that the USFS utilize herbicide application as a last resort in greater sage-grouse habitat, and modify the timeline in which herbicide application is allowable.

Bull trout and other threatened and endangered fish species are also known to be negatively affected by herbicides. According to the FWS, fish may be subject to “chronic sublethal impacts to performance, swimming ability, migratory behavior, reproductive success, and survival rates.”¹³ Highly hazardous herbicide mixtures that are known to negatively affect aquatic species, such as 2,4-D amine esters, should not be used in bull trout habitat.

Irregardless of application method, the USFS should consult with the US Fish and Wildlife Service and National Oceanic and Atmospheric Administration – Fisheries to determine the degree of effects and reasonable and prudent measures to minimize risks to TES species.

⁸ Murray, J.A. and L.M. Vaughan. 1970. Measuring pesticide drift at distances to four miles. *J. Appl. Meteorol.* 9:79-85.

⁹ Robinson, E. and L.F. Fox. 1978. 2,4-D herbicides in central Washington. *Air Pollut. Cont. Assoc.* 28(10):1015-1020.

¹⁰ Glantz, C.S., M.N. Schwartz, and P.J. Perrault. 1989. An assessment of the meteorological conditions associated with herbicide drift in the Horse Heaven hills/Badger Canyon/Tri-Cities Area during the period from August 6 through 11, 1988. Battelle Pacific Northwest Laboratories.

¹¹ http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/espp-cbd.html

¹² Bird, Brittany and Schenk, Michelle. Sage-grouse (2005). Natural Resources Conservation Service and Wildlife Habitat Council. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_010109.pdf. Accessed 6 Aug. 2015.

¹³ U.S. Fish and Wildlife Service. 2014. Revised draft recovery plan for the coterminous United States population of bull trout (*Salvelinus confluentus*). Portland, Oregon. xiii + 151 pp.

Monitoring and Alternative Development

Even with a limitation to ground-based spraying, it is critical to monitor drift in adjacent areas and to establish thresholds when monitoring indicates that drift exceeds established levels.

As recommended in *Use of Chemical Pesticides in Certified Forests* (Radosevich et al. 2000), a pesticide monitoring program should document the movement of pesticides during or following application. Water quality samples should be routinely gathered in areas targeted for application. Terrestrial samples should also be gathered adjacent to application areas to evaluate potential drift, even when not applied aurally.

The USFS should carefully evaluate and document alternative approaches to chemical application. This should include modifications in silvicultural prescriptions, such as maintaining forests in mixed-age and mixed-species conditions to reduce the competition from competing vegetation.