



# Firefighters United for Safety, Ethics, and Ecology

2852 Willamette St. #125, Eugene, OR 97405 (541)338-7671 info@fusee.org

**TO:** USDA Forest Service

c/o fireas@contentanalysisgroup.com, fireea@contentanalysisgroup.com

**FROM:** Timothy Ingalsbee, Firefighters United for Safety, Ethics, and Ecology (FUSEE)

**SUBJECT:** FUSEE scoping comments on the national EA on aerial application of chemical fire retardants

**DATE:** August 26, 2006

Dear U.S. Forest Service and Content Analysis Group:

Please accept the following scoping comments from FUSEE concerning the national EA on aerial application of chemical fire retardants presented in the Federal Register on July 28, 2006 (71 Fed Reg 42797). FUSEE is a national nonprofit organization whose members include current, former and retired fire management workers and other concerned citizens. Our mission is to promote safe, ethical, and ecological fire management with the goal of changing the dominant paradigm of fire management from reactive wildfire suppression to proactive ecological restoration.

## **The EA must contain a comprehensive range of alternatives**

The use of aerial retardants has significant social, economic and ecological effects. The public and decision makers will best be served if the Forest Service compares a comprehensive range of alternatives.

These alternatives should include (but not be limited to):

- Unrestricted use of aerial retardant and foaming agents.
- Continued use of retardant and foams under the Guidelines for Aerial Application of Fire Retardant and Foams in Aquatic Environments (April 20, 2000).
- More restrictive use of retardant and foams that would prohibit their use within one quarter mile from all mapped waterways, in wilderness and wilderness study areas, in inventoried roadless areas, research natural areas, botanical areas, and other specially protected management areas.
- Use of new, less toxic aerial retardants.
- Using only water as an aerial retardant.
- Complete prohibition of the use of aerial retardant.

**The EA should fully disclose the direct, indirect, cumulative, short-term and long-term effects of retardant on the aquatic environment.**

The adverse effects of fire retardant go beyond the effects of sodium ferrocyanide.

Simply removing that chemical from fire retardant does not eliminate all of the toxic effects of retardant on fish and other wildlife. Scientific research has demonstrated that the ammonia in retardant is equally or more toxic to aquatic wildlife, and their effects may last several years as they move through groundwater to open bodies of water.

Fire retardants not only kill fish and amphibians outright, but they can also trigger algae blooms in still bodies of water which, through reducing the oxygen content in water, can kill fish and other aquatic wildlife over a prolonged time period. Since these effects can be delayed for a number of years, the EA should analyze and disclose a wide range of possible direct, indirect, and cumulative impacts to aquatic systems.

**The EA should fully disclose the direct, indirect, cumulative, short-term and long-term effects of retardants on human health, including municipal water supplies.**

The direct effects of retardants and foams on human health, especially wildland firefighters, must be disclosed. The indirect effects of retardants and foams on water quality for municipal water systems must also be disclosed. Applications of retardants in forested watersheds may travel considerable distances before reaching reservoirs, holding ponds or other sources for municipal water, where the chemicals may stimulate algae growth that adversely affects municipal water quality. The EA needs to analyze and disclose the environmental and economic impacts of retardants in degrading municipal water quality.

**The EA should fully disclose the direct, indirect, cumulative, short-term and long-term effects of retardants on soil and vegetation.**

The EA has been too narrowly construed to examine the effects of retardants only on aquatic systems. The chemicals in retardants and foams also can adversely affect soil chemistry and vegetation growth. For example, aerially applied retardants on the 2002 Biscuit Fire altered soil chemistry. This gave exotic vegetation the opportunity to displace native and endemic vegetation that had evolved with adaptations to survive in naturally nutrient-poor serpentine soils.

The fertilizer in retardants is especially advantageous to exotic and invasive weeds. On the 1999 Kirk Fire, for example, “hotspots” of invasive weeds grew in sites sprayed by aerially-applied retardants deep inside the Ventana Wilderness Area. Retardants can also stimulate the growth of exotic grasses (e.g. cheatgrass) that can threaten natural regeneration of native plants, and have the perverse effect of increasing fuel hazards in recently-burned sites. The EA must disclose the full range of effects of retardants on soil and vegetation, including stimulating the spread of exotic and invasive weeds.

**The EA should disclose the full range of economic costs of aerially-applied retardants.**

Every year millions of gallons of fire retardant chemicals are applied to wildland fires, at great economic expense to taxpayers. The EA needs to disclose the full range of costs involved in aerially-applied retardants. The analysis should include both costs per gallon or per pound of retardant chemicals (both mixed with water and dry), and the total cumulative costs of retardant applications during an “average” year of wildfire suppression. The EA also needs to disclose the full costs of aerially applying retardants,

detailing the costs of flight time for the full range of kinds of helicopters and fixed-wing aircraft used to apply retardants. Indeed, aviation resources are one of the highest and most rapidly growing costs of wildfire suppression. Flight costs should be disclosed on an hourly and daily basis for each aircraft type, and a total cumulative cost of all retardant aircraft for an “average” year of wildfire suppression.

**The EA should disclose the effects of fire retardants on compliance with the Clean Water Act.**

The courts (League of Wilderness Defenders v. Forsgren, 309 F.3d 1181 (9th Cir. 2002)) have determined that discharge of chemicals from Forest Service aircraft is a point source of pollution that requires a National Pollutant Discharge Elimination System (NPDES) permit according to regulations promulgated in 1976 at 40 C.F.R. 122.27. The EA should disclose how the Forest Service plans to comply with the Clean Water Act while aerially applying fire retardant chemicals.

**The EA should disclose the direct, indirect, and cumulative effects of connected fire suppression actions.**

To be effective in containing and controlling wildfire spread, fire retardants must be applied along with other suppression methods. Application of fire retardant is clearly a “connected action” with other fire fighting activities, including but not limited to:

- Construction of firelines by hand crews, bulldozers, and other heavy equipment.
- Construction of helispots, safety zones, staging grounds for supplies and personnel, and other clearings for suppression operations.
- Backfire, burnout, and other ignition operations.
- Hazard tree felling.
- Road construction including reconstruction of previously decommissioned roads.

These and other suppression activities are clearly connected actions with retardant use, and the full range of direct, indirect, and cumulative environmental effects of these wildfire suppression methods must be fully analyzed and disclosed in the EA. Additionally, the EA should disclose the effects and effectiveness of using aerially-applied retardant as the only suppression technique applied, and include site-specific examples, if any, where this actually occurred.

**The EA should disclose the cumulative effects of fire exclusion from the use of retardant chemicals in fire suppression.**

Volumes of recent scientific studies have documented the widespread adverse effects on fire-dependent species and fire-adapted ecosystems from attempted fire exclusion. The ecological effects of fire exclusion include changes in stand structure, species composition, and fuel loads. The indirect and cumulative impacts of fire exclusion is causing a number of "forest health" problems, including uncharacteristically large, severe wildfires. The EA needs to fully disclose the cumulative effects of fire retardant in suppressing wildland fires in fire-dependent species and fire-adapted ecosystems.

## **The Forest Service should conduct an EIS rather than an EA.**

The whole array of suppression actions connected to aerially-applied fire retardants, and a rigorous analysis of their direct, indirect, and cumulative impacts, will most likely result in a determination of significant impacts. This will result in the necessity of conducting an EIS in order to comply with the National Environmental Policy Act (NEPA). The U.S. Forest Service will do taxpayers and wildland firefighters a great service to initiate an EIS on fire retardants and their connected suppression actions now rather than go through with a narrowly-crafted EA of limited scope that will ultimately be flawed and vulnerable to future litigation.

Systematic wildfire suppression has arguably had the most extensive and adverse impacts on America's wildlands. The fact that suppression methods have never undergone environmental analysis or informed public involvement in accordance with NEPA is shocking, to say the least. This process is long overdue, and the Forest Service should perform the analysis with the utmost of scientific objectivity, analytical rigor, and professional integrity. Only an EIS can provide the kind of comprehensive environmental analysis and informed public involvement necessary to adequately inform the American people and policymakers on the risks, costs, and impacts of reactive wildfire suppression methods including fire retardant. We therefore strongly urge the Forest Service to expand the scope of the document from an EA to an EIS

### **Conclusion**

In our opinion, the more the Forest Service objectively analyses and truthfully discloses the full array of adverse social, economic, and ecological impacts caused by reactive wildfire suppression actions--including but not limited to toxic aerially-applied fire retardant chemicals--the better the case the agency can make to policymakers and the American people for the need to conduct proactive fire and fuels management projects in order to restore fire-adapted ecosystems. Ultimately, it is only through ecological restoration of fire-adapted ecosystems that the working environment for wildland firefighters will be made safer and the fruits of their labors will become more ethically and ecologically sound. It is with that goal of helping fire management professionals with social and ecological conscience to change the paradigm and dominant focus of federal fire management from suppression to restoration that we respectfully submit the above comments.

Thank you for this opportunity to provide scoping comments. Please send us any and all future documents and news of any developments related to this NEPA process.

Sincerely,

Timothy Ingalsbee, Ph.D.

Executive Director, Firefighters United for Safety, Ethics, and Ecology