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**From:** Doug Heiken [onrcdoug@efn.org]  
**Sent:** Wednesday, August 23, 2006 3:37 PM  
**To:** fireea  
**Cc:** James Johnston; Tim Ingalsbee; Andy Stahl; Rich Fairbanks  
**Subject:** ONRC scoping comments on the national EA on aerial application of chemical fire retardants

FROM:  
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<!--[if !vml]-->  
22 August 2006

TO:  
**USDA Forest Service**  
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MORE INFO:  
<http://www.fs.fed.us/fire/retardant/>  
<http://www.fsfireretardant.net>  
[http://www.fusee.org/ffighters/chemical\\_use.pdf](http://www.fusee.org/ffighters/chemical_use.pdf)

Subject: ONRC scoping comments on the national EA on aerial application of chemical fire retardants

Dear Forest Service and Content Analysis Group:

Please accept the following scoping comments from Oregon Natural Resources Council concerning the national EA on aerial application of chemical fire retardants noticed in the Federal Register July 28, 2006. 71 Fed Reg 42797. ONRC represents about 5,000 members who support our mission to protect and restore Oregon's wildlands, wildlife, and water as an enduring legacy. Our goal is to protect areas that remain intact while striving to restore areas that have been degraded. This can be accomplished by moving over-represented ecosystem elements (such as logged and roaded areas and fire suppressed areas) toward characteristics that are currently under-represented (such as roadless areas and complex old forest).

Fire suppression may be a necessary forest practice but it needs significant reform to bring it into line with current scientific understandings about how ecological systems are renewed and maintained by succession, disturbance, and lack of disturbance at various scales and intensities.

Since aerial application of fire retardant is part of a complex integrated nationwide strategy of fire suppression, the Forest Service must comply with NEPA's mandate to consider the cumulative effects of all connected actions including the entire suite of fire suppression methods and practices: maintaining remote roads for access during fires; fire lines, fire breaks, back-burning, burn-outs; tree felling; etc. In this process the FS should refer to Tim Ingalsbee's excellent report: "Collateral Damage: The Environmental Effects of Firefighting - The 2002 Biscuit Fire Suppression Actions and Impacts." May

8/24/2006

2004. Available here:

<http://www.klamathforestalliance.org/Documents/collateraldamage.html> OR

[http://www.americanlands.org/documents/1092272791\\_collamage.pdf](http://www.americanlands.org/documents/1092272791_collamage.pdf)

The FS should consider a NEPA alternative that relies on the use of just water (H<sub>2</sub>O) to retard fires.

Water is more widely available, cleaner, cheaper, and reasonably effective at fighting fires. It takes 540 calories of heat to turn one gram of liquid water into water vapor.

<http://daphne.palomar.edu/jthorngren/latent.htm> The marginal benefit from adding chemicals to the water does not outweigh the cumulative adverse impacts of applying chemicals to the land. The use of water to fight fires also has significant impacts on aquatic habitat, so the FS should carefully document those impacts too.

The Forest Service should develop a NEPA alternative that strictly limits the aerial application of fire retardant to exceptional circumstances where the benefits are assured to be high magnitude and the risks are assured to be low magnitude. If the FS thinks that the chemicals are needed in certain circumstances such as in the immediate vicinity of homes that could also be a NEPA alternative.

Since small streams are directly connected to larger waterbodies that provide critical habitat and ecosystem services, and since pilots cannot readily see small water bodies, the risk is too great that our water supplies will be accidentally polluted by chemicals.

Fire suppression in general, and aerial application of fire retardant in particular, has significant environmental impacts and requires an EIS. Significant impacts result from:

- application in native ecosystems where such chemicals are alien;
- application into water bodies that impair beneficial uses;
- application in habitat for threatened and endangered species;
- application in protected areas such as RNAs, LSRs, IRAs, etc;
- the FS never knows in advance where or when fire retardant will be needed, therefore application occurs without pre-treatment surveys that would help direct treatments away from sensitive sites and help mitigate the impacts;
- smoke limits visibility, thereby decreasing the accuracy of retardant application
- fire tends to spread more rapidly on steep slopes, yet dropping retardant on steep slopes increase the risk that retardant will migrate to water bodies.
- since fire is a natural process that has been excluded from the landscape for many decades, fire suppression itself has an adverse environmental impact;
- fertilizer based fire retardants have significant cumulative impacts when combined with dry deposition of nutrients from various pollution sources. Many native ecosystems are already suffering from excessive nutrient input, yet chemical fire retardant will only exacerbate an already impacted system.
- fertilizer-based fire retardants can increase the vigor of invasive weeds.
- The guidelines for applying retardants near waterways are full of loopholes. The limitations on applying retardants near streams do not apply:
  - when the pilot cannot see the waterway;
  - when the limitation would making flying more dangerous;
  - where they want use the waterway as an anchor point;
  - when potential loss of natural resources outweighs the potential loss of aquatic life;
  - when life or property is at risk; (When is property not at risk? the exception just swallowed the rule!)

FEAS

Sincerely,

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Doug Heiken

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