Decision Notice

& Finding of No Significant Impact

Aerial Application of Fire Retardant

US Forest Service

Background

The United States Forest Service has conducted a programmatic environmental analysis and prepared an Environmental Assessment (EA) to determine whether allowing future nationwide aerial application of fire retardant on National Forest System ((NFS) lands using *Guidelines for Aerial Application of Fire Retardant and Foams Near Waterway* (April 20, 2000) to suppress wildland fires[1] would result in significant environmental impacts as defined by the National Environmental Policy Act of 1969, and to comply with the Endangered Species Act.

Environmental effects have been analyzed on an agency-wide, programmatic scale by an interdisciplinary team. The affected area is limited to NFS lands, which comprise approximately 193 million acres (Fig. 1), portions of which contain threatened, endangered, or candidate species.

Figure1. Map of National Forest System lands.

[1] Any fire occurring on the wildlands, regardless of ignition source, damages, or benefits.

On October 11, 2007, I issued a conditional Decision Notice and Finding Of No Significant Impact in this matter prior to the completion of consultation with the Fish and Wildlife Service under the Endangered Species Act. I did so to address issues resulting from pending litigation, *Forest Service Employees for Environmental Ethics v. US Forest Service*, C.A. No. 03-165 (D. Mont.). In that notice, I stated that revision may be required upon completion of that consultation. Since then, the Fish and Wildlife Service has completed consultation and issued a biological opinion, finding jeopardy to the continued existence of 45 endangered or threatened species or destruction or adverse modification of critical habitat. In its biological opinion, the Fish and Wildlife Service proposed a reasonable and prudent alternative to avoid jeopardy or destruction or adverse modification of critical habitat. I have accepted this reasonable and prudent alternative. I am issuing this Decision Notice to amend the earlier, conditional Decision Notice.

The purpose and need for the proposed action is to allow the Forest Service to maintain the ability to rapidly reduce wildfire intensities and rates of spread until ground forces can safely take suppression action and throughout the duration of an incident without harming fish and aquatic habitat. High fire intensities and rapid rates of spread greatly reduce the ability of ground-based firefighters to fight wildland fires directly and safely. In addition, the remote nature of many wildland fires can delay the deployment of ground forces for suppression. Firefighters need the ability to quickly reduce rates of spread and intensities of wildland fires, often in remote locations, and to do so until ground forces can safely take suppression action or until a wildfire is contained or controlled.

The EA documents the analysis of two alternatives – a No Action Alternative and the Proposed Action Alternative.

Decision and Rationale

Based upon my review of the EA *Aerial Application of Fire Retardant*, formal consultation with the National Marine Fisheries Service and the US Fish and Wildlife Service, and consideration of the analysis and information contained in the project record, I have decided to implement Alternative 2, Proposed Action. This alternative continues the nationwide aerial application of fire retardant to fight fires on NFS lands while adopting the current interim *Guidelines for Aerial Delivery of Retardant or Foam near Waterways* (U.S. Forest Service and others 2000) as permanent. The guidelines, herein referred to as the 2000 Guidelines, define a waterway as any body of water including lakes, rivers, streams, and ponds whether or not they contain aquatic life. This is broadly interpreted to include swamps, marshes, and other wetlands. The 2000 Guidelines, established by the Forest Service, Bureau of Land Management, National Park Service, and Fish and Wildlife Service to prevent the aerial application of fire retardant into waterways are as follows:

> **Definition:**
> WATERWAY – Any body of water including lakes, rivers, streams and ponds whether or not they contain aquatic life.
>
> **Avoid aerial application of retardant or foam within 300 feet of waterways**. These guidelines do not require the helicopter or airtanker pilot-in-command to fly in such a way as

to endanger his or her aircraft, other aircraft, or structures or compromise ground personnel safety.

Guidance for pilots: To meet the 300-foot buffer zone guideline, implement the following:

- *Medium/Heavy Airtankers:* When approaching a waterway visible to the pilot, the pilot shall terminate the application of retardant approximately 300 feet before reaching the waterway. When flying over a waterway, pilots shall wait one second after crossing the far bank or shore of a waterway before applying retardant. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant within the 300-foot buffer zone.

- *Single Engine Airtankers:* When approaching a waterway visible to the pilot, the pilot shall terminate application of retardant or foam approximately 300 feet before reaching the waterway. When flying over a waterway, the pilot shall not begin application of foam or retardant until 300 feet after crossing the far bank or shore. The pilot shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant within the 300-foot buffer zone.

- *Helicopters:* When approaching a waterway visible to the pilot, the pilot shall terminate the application of retardant or foams 300 feet before reaching the waterway. When flying over a waterway, pilots shall wait five seconds after crossing the far bank or shore before applying the retardant or foam. Pilots shall make adjustments for airspeed and ambient conditions such as wind to avoid the application of retardant or foam within the 300-foot buffer zone.

Exceptions:

- When alternative line construction tactics are not available due to terrain constraints, congested area, life and property concerns or lack of ground personnel, it is acceptable to anchor the foam or retardant application to the waterway. When anchoring a retardant or foam line to a waterway, use the most accurate method of delivery in order to minimize placement of retardant or foam in the waterway (e.g., a helicopter rather than a heavy airtanker).

- Deviations from these guidelines are acceptable when life or property is threatened and the use of retardant or foam can be reasonably expected to alleviate the threat.

- When potential damage to natural resources outweighs possible loss of aquatic life, the unit administrator may approve a deviation from these guidelines.

Threatened and Endangered (T&E) Species:

The following provisions are guidance for complying with the emergency section 7 consultation procedures of the ESA with respect to aquatic species. These provisions do not alter or diminish an action agency's responsibilities under the ESA.

Where aquatic T&E species or their habitats are potentially affected by aerial application of retardant or foam, the following additional procedures apply:

1. As soon as practicable after the aerial application of retardant or foam near waterways, determine whether the aerial application has caused any adverse effects to a T&E species or their habitat. This can be accomplished by the following:

    a. Aerial application of retardant or foam outside 300 feet of a waterway is presumed to avoid adverse effects to aquatic species and no further consultation for aquatic species is necessary.

    b. Aerial application of retardant or foam within 300 feet of a waterway requires that the unit administrator determine whether there have been any adverse effects to T&E species within the waterway.

2. These procedures shall be documented in the initial or subsequent fire reports.

3. If there were no adverse effects to aquatic T&E species or their habitats, there is no additional requirement to consult on aquatic species with Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS).

4. If the action agency determines that there were adverse effects on T&E species or their habitats then the action agency must consult with FWS and NMFS, as required by 50 CFR 402.05 (Emergencies). Procedures for emergency consultation are described in the Interagency Consultation Handbook, Chapter 8 (March 1998) [U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998]. In the case of a long duration incident, emergency consultation should be initiated as soon as practical during the event. Otherwise, post-event consultation is appropriate. The initiation of the consultation is the responsibility of the unit administrator.

My decision incorporates both of the reasonable and prudent alternatives to avoid jeopardy to the continued existence of any endangered or threatened species or destruction or adverse modification of critical habitat from the National Marine Fisheries Service and from the US Fish and Wildlife Service biological opinions.

Regulations at 50 CFR 402.02 implementing section 7 of the Endangered Species Act define reasonable and prudent alternatives as alternative actions, identified during formal consultation, that: (1) can be implemented in a manner consistent with the intended purpose of the action; (2) can be implemented consistent with the scope of the action agency's legal authority and jurisdiction; (3) are economically and technologically feasible; and (4) would, avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat.

The reasonable and prudent alternative provided by the National Marine Fisheries Service does not require any operational changes to the use of fire retardant. Rather, it involves additional testing and monitoring. My decision includes the following measures from the National Marine Fisheries Service biological opinion:

1. The Forest Service will provide evaluations on the two fire retardant formulations, LC 95-A and 259R, for which acute toxicity tests have not been conducted, using standard testing protocols. Although direct fish toxicity tests have not been conducted on three

additional formulations, G75-W, G75-F, LV-R, studies are not warranted in light of the fact the Forest Service intends to phase out their use of these formulations by 2010. All formulations expected to be in use beyond 2010 will be evaluated using, at a minimum, the established protocols to assess acute mortality to fish. Evaluations must be completed and presented to the National Marine Fisheries Service no later than two years from the date of the biological opinion. Depending on the outcome of these evaluations and after conferring with the National Marine Fisheries Service, the Forest Service will make appropriate modifications to the program that would minimize the effects on the National Marine Fisheries Service's listed resources (e.g., whether a retardant(s) should be withdrawn from use and replaced with an alternative retardant(s)).

2. The Forest Service will engage in toxicological studies on long-term fire retardants approved for current use in fighting fires, to evaluate acute and sublethal effects of the formulations on the National Marine Fisheries Service's listed resources. The toxicological studies will be developed and approved by both the Forest Service and the National Marine Fisheries Service. The studies should be designed to explore the effects of fire retardant use on: unique life stages of anadromous fish such as smolts and buried embryo/alevin life stages ranging in development from spawning to yolk sac absorption and the onset of exogenous feeding (approximately 30 days post-hatch); and anadromous fish exposed to fire retardants under multiple stressor conditions expected during wildfires, such as elevated temperature and low dissolved oxygen. Within 12 months of accepting the terms of the biological opinion, the Forest Service will provide the National Marine Fisheries Service with a draft research plan to conduct additional toxicological studies on the acute and sublethal effects of the fire retardant formulations. Depending on the outcome of these studies described per the research plan and after conferring with the National Marine Fisheries Service, the Forest Service will make appropriate modifications to the program that would minimize the effects on the National Marine Fisheries Service's listed resources (e.g., whether a retardant(s) should be withdrawn from use and replaced with an alternative retardant(s)).

3. The Forest Service will develop guidance that directs the Forest Service to conduct an assessment of site conditions following wildfire where fire retardants have entered waterways, to evaluate the changes to on site water quality and changes in the structure of the biological community. The field guidance will require monitoring of such parameters as macroinvertebrate communities, soil and water chemistry, or other possible surrogates for examining the direct and indirect effects of fire retardants on the biological community within and downstream of the retardant drop area as supplemental to observations for signs of dead or dying fish. The guidance may establish variable protocols based upon the volume of retardants expected to have entered the waterway, but must require site evaluations commensurate with the volume of fire retardants that entered the waterway.

4. The Forest Service will provide policy and guidance to ensure that the Forest Service local unit resource specialist staff provide the local the National Marine Fisheries Service Regional Office responsible for section 7 consultations with a summary report of the site assessment that identifies: (a) the retardant that entered the waterway, (b) an estimate of the area affected by the retardant, (c) a description of whether the retardant was accidentally dropped into the waterway or whether an exception to the 2000 Guidelines

was invoked and the reasons for the accident or exception, (d) an assessment of the direct and indirect impacts of the fire retardant drop, (e) the nature and results of the field evaluation that was conducted following control and abatement of the fire, and any on site actions that may have been taken to minimize the effects of the retardant on aquatic communities.

5. The Forest Service will provide the National Marine Fisheries Service Headquarters Office of Protected Resources with a biennial summary (every two years) that evaluates the cumulative impacts (as the Council on Environmental Quality has defined that term pursuant to the National Environmental Policy Act of 1969) of their continued use of long-term fire retardants including: (a) the number of observed retardant drops entering a waterway, in any subwatershed and watershed, (b) whether the observed drops occurred in a watershed inhabited by the National Marine Fisheries Service's listed resources, (c) an assessment as to whether listed resources were affected by the misapplication of fire retardants within the waterway, and (d) the Forest Service's assessment of cumulative impacts of the fire retardant drops within the subwatershed and watershed and the consequences of those effects on the National Marine Fisheries Service's listed resources. The evidence the Forest Service will use for this evaluation will include, but is not limited to: (i) the results of consultation with the National Marine Fisheries Service's Regional Offices and the outcome of the site assessment described in detail in the previous element of this RPA (Element 4) and (ii) the results of new fish toxicity studies identified within Element 2; and (d) any actions the Forest Service took or intends to take to supplement the 2000 Guidelines to minimize the exposure of listed fish species to fire retardants, and reduce the severity of their exposure.

My decision includes the following measures from the reasonable and prudent alternative provided in the US Fish and Wildlife Service's biological opinion. The reasonable and prudent alternative provided by the US Fish and Wildlife Service does not require alteration of the proposed action as considered within the scope of the nation-wide, programmatic environmental assessment. It does include measures to improve local decision-making to insure that site-specific fire suppression decisions are informed by current information regarding protected species and critical habitat, requirements to continue with emergency consultation as needed, and provisions to integrate concerns for protected species and critical habitat in the prioritization of fuels reduction projects at the local level. They also continue the agency's commitment to research into effective, low-impact fire suppression materials.

The Forest Service will develop Fish and Wildlife Service-approved species-specific measures prior to the fire season to be carried out before, during, and/or after fire emergency response for each National Forest System unit in which the proposed action was found likely to jeopardize listed species or destroy or adversely modify critical habitat found in Table 1. The measures will be developed in consultation between the Forest Service unit supporting species listed in Table 1 and the appropriate local Fish and Wildlife Service office. The measures will include the following considerations:

1. The Forest Service will coordinate with local Fish and Wildlife Service offices each year prior to the onset of the fire season to ensure that 1) the most up-to-date detailed maps or descriptions of areas on National Forest System lands that are designated critical habitat or occupied by species found in Table 1, 2) this information is incorporated in local fire

planning and distributed to appropriate resources by the local Fire Management Officer, 3) maps and information are made available to incident commanders and fire teams for the purposes of avoiding application of retardants to areas designated critical habitat or occupied by species found in Table 1, whenever possible, including use of best available technologies to avoid areas designated critical habitat or occupied by species found in Table 1, and 4) any other appropriate conservation measures are included to avoid the likelihood of jeopardizing species or adversely modifying or destroying critical habitat, such measures may include enhancement of populations or other appropriate contingency measures.

2. Wherever practical, the Forest Service will prioritize fuels reduction projects for lands in the National Forest System that are in close vicinity to areas designated critical habitat or occupied by species listed in Table 1, so as to reduce the need to use aerially applied fire retardants.

3. Whenever practical, the Forest Service will use water or other less toxic fire retardants than those described in the proposed action within areas designated critical habitat or occupied by species in Table 1.

4. If areas designated critical habitat or occupied by species found in Table 1 are exposed to fire retardant, then the Forest Service will initiate Emergency Consultation pursuant to regulations at 50 CFR 402.05 implementing section 7 of the Endangered Species Act of 1973, as amended. As part of the Emergency Consultation, the following measures may apply:

    a. Conduct monitoring in coordination with the local Fish and Wildlife Service office of the direct, indirect, and cumulative impacts of the fire retardant application on listed species. Fish and Wildlife Service-approved monitoring protocols and reporting frequency will be developed. Monitoring for aquatic species may include water quality.

    b. If appropriate, and in consultation with the Fish and Wildlife Service, include measures to prevent or compensate for population declines due to application of fire retardant.

    c. During monitoring, all non-native plant species will be removed from areas of concern as appropriate for the area and listed species affected, as determined in consultation with the appropriate Fish and Wildlife Service office. Appropriate weed control methods will be developed in coordination with the local Fish and Wildlife Service office.

Table 1. Species for which the Forest Service will develop Fish and Wildlife Service-approved species-specific measures prior to the fire season to be carried out before, during, and/or after fire emergency response.

	Common name	Federal status	Scientific name
	Plants		
1.	Munz's Onion	E	*Allium munzii*
2.	Bear Valley Sandwort	T	*Arenaria ursine*
3.	Cushenbury Milk-vetch	E	*Astragalus albens*
4.	Tripleribbed Milk-vetch	E	*Astragalus tricarinatus*
5.	Mariposa pussypaws	T	*Calyptridium pulchellum*
6.	Ashgray Paintbrush (aka Ash-Grey Indian Paintbrush	T	*Castilleja cinerea*
7.	Vail Lake Ceanothus	T	*Ceanothus ophiochilus*
8.	Purple Amole (aka Camatta Canyon amole)	T	*Chlorogalum purpureum*
9.	Slender-horned Spineflower	E	*Dodecahema leptoceras*
10.	Parish's daisy	E	*Erigeron parishii*
11.	Southern Mountain Buckwheat	T	*Eriogonum kennedyi var. austromontanum*
12.	Cushenbury Buckwheat	E	*Eriogonum ovalifolium var. vineum*
13.	Holy Ghost Ipomopsis	E	*Ipomopsis sancti-spiritus*
14.	San Bernardino Mountains Bladderpod	E	*Lesquerella kingii ssp. Bernardina*
15.	Nevin's Barberry (=Truckee)	E	*Mahonia (=Barberia) nevinii*
16.	Cushenbury Oxytheca	E	*Oxytheca parishii var. goodmaniana*
17.	San Bernardino Bluegrass	E	*Poa atropurpurea*
18.	Bird-footed Checkerbloom (aka Pedate Checkermallow)	E	*Sidalcea pedata*
19.	California Dandelion	E	*Taraxacum californicum*
20.	Slender-petaled mustard	E	*Thelypodium stenopetalum*
	Insects		
21.	Quino Checkerspot Butterfly	E	*Euphydryas editha quino*
22.	Laguna Mountains Skipper	E	*Pyrgus ruralis lagunae*
	Freshwater mussels		
23.	Finelined Pocketbook	T	*Lampsilis altilis*

	Common name	Federal status	Scientific name
24.	Alabama Moccasinshell	T	*Medionidus acutissimus*
25.	Coosa Moccasinshell	E	*Medionidus parvulus*
26.	James spiny mussel	E	*Pleurobema collina*
27.	Southern Clubshell	E	*Pleurobema decisum*
28.	Southern Pigtoe	E	*Pleurobema georgianum*
29.	Triangular Kidneyshell	E	*Ptychobranchus greenii*
	Fish		
30.	Santa Ana Sucker	T	*Catostomus santaanae*
31.	Blue shiner	T	*Cyprinella caerulea*
32.	Etowah darter	E	*Etheostoma etowahae*
33.	Unarmored Threespine Stickleback	E	*Gasterosteus aculeatus williamsoni*
34.	Owens Tui Chub	E	*Gila bicolor snyderi*
35.	Sonora Chub	T	*Gila ditaenia*
36.	Little Colorado Spinedace	T	*Lepidomeda vittata*
37.	Spikedace	T	*Meda fulgida*
38.	Paiute cutthroat trout	T	*Oncorhynchus clarki seleniris*
39.	Greenback cutthroat trout	T	*Oncorhynchus clarki stomias*
40.	Little Kern Golden Trout	T	*Oncorhynchus mykiss whitei*
41.	Amber Darter	E	*Percina antesella*
42.	Conasauga logperch	E	*Percina jenkinsi*
43.	Kendall Warm Springs dace	E	*Rhinichthys osculus thermalis*
44.	Loachminnow	T	*Tiaroga cobitis*
	Amphibians		
45.	Mountain yellow-legged frog (Southern California DPS)	E	*Rana muscosa*

My decision does not result in a requirement to apply retardant, nor does it compel the use of retardant at a later time or place. This decision does allow the Incident Commanders and fire managers to use retardant, on NFS lands, under the 2000 Guidelines, when conditions warrant the use of retardant.

Because a limited number of effective firefighting tools exist, it is essential that firefighters are able to utilize every available means—including retardant—to fight wildland fires. All firefighting tools help contain and control fires, as well as prevent damage to human life, property, and valuable natural resources. This decision will allow Incident Commanders and fire

management personnel the continued ability to respond to a wildfire incident with a full range of fire suppression tools, including the use of retardant where necessary and appropriate, maintain the ability to rapidly reduce wildfire intensities and rates of spread until ground forces can safely take suppression action.

Other Information Considered

I considered the preliminary findings of the study by Levi Besaw and Giles Thelan. The study was prompted in response to observing a vegetative change where fire retardant had been dropped on Mt. Jumbo. The objectives of this study are to investigate the possible effects of retardant on annual versus perennial plants and to identify suitable native seed mixes for use in post-retardant environments. The study's preliminary findings noted an increase in invasive species (cheatgrass and tumbleweed mustard) and a decline in two noxious weed species (spotted knapweed and Dalmatian toadflax).The preliminary Mount Jumbo observations are not inconsistent with the findings of two studies considered and incorporated by reference in the EA:

> Hopmans, P.; Bickford, R. 2003. Effects of fire retardant on soils of heathland in Victoria. Research Report No. 70. Victoria, Canada: Fire Management Department of Sustainability and Environment, and
>
> Larson, D.L.; Newton, W.E., 1996, Effects of fire retardant chemicals and fire suppressant foam on North Dakota prairie vegetation. Proceedings of the North Dakota Academy of Sciences. Volume 50.

Just as the Mount Jumbo study observed that the plant growth effects of retardant were limited to one growing season, the two studies cited in the EA found short-term increases in available nitrogen and other nutrients in soils treated with retardant. I intend to review the final conclusions of the Mount Jumbo study and evaluate their relevance to the Forest Service aerial fire retardant program.

In accepting the reasonable and prudent alternative provided by the Fish and Wildlife Service, I have committed to monitoring in coordination with the local Fish and Wildlife Service offices of the direct, indirect, and cumulative impacts of the fire retardant application on listed species in areas designated critical habitat or occupied by species found in Table 1. During monitoring, all non-native plant species will be removed from areas of concern as appropriate for the area and listed species affected, as determined in consultation with the appropriate Fish and Wildlife Service office. Appropriate weed control methods will be developed in coordination with the local Fish and Wildlife Service office. Accordingly, any effects such as those noted in the Mount Jumbo study are not expected to be significant for these listed species.

Other Alternatives Considered

In addition to the selected alternative, I considered the No Action alternative in detail and five other alternatives, which were not analyzed in detail. A description of the range of alternatives considered can be found in the EA on pages 9-12.

Under the No Action alternative, the Forest Service would discontinue the aerial application of fire retardant, for those fires occurring on NFS lands. Ground-based application of foams, water enhancers (gels), and water (including aerial application of water only) would continue to be available for use by Incident Commanders as suppression tools. This alternative would not

prohibit the aerial application of fire retardant on lands owned or administered by State, private, or other Federal entities. Aerial delivery of water would continue to be available to Incident Commanders and other fire managers.

As described in the EA on page 3, Forest Service experience with aerial delivery of water has shown that it is not effective in reducing fire intensity or rate of spread because air turbulence created by the aircraft causes most of the water to drift off course and evaporate before reaching the fire on the ground. Accordingly, this alternative would not meet the purpose and need to reduce wildfire intensities and rapid rates of spread.

Public Involvement

A proposal to prepare an analysis on allowing the aerial application of fire retardant to continue under the 2000 Guidelines was listed in the Schedule of Proposed Actions in October, 2006. The proposal was provided to the public and other agencies for a 30-day scoping period on July 28, 2006. On the same day, a notice was published in the Federal Register indicating the intention of the Forest Service to prepare the EA. As a result of the scoping period, the agency received 17 letters. The Forest Service also contacted other Federal and State fire organizations for input. In addition, as part of the public involvement process, the agency established a public forum on the internet for the public to discuss and exchange ideas relating to the Proposed Action.

Using the scoping comments from the public, other agencies, and Native American Tribes, the interdisciplinary team identified several issues regarding the effects of the proposed action. The main issues of concern included aquatic environments, cultural resources, upland vegetation, decision regarding wildfire suppression, and federal, state, and local laws (see EA page 7).

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that this action will not have a significant impact on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

1. My finding of no significant impact is not biased by the beneficial effects of the action.

2. There will be no significant effects on public health and safety. The effects of fire retardant on human health and safety has been analyzed and evaluated by the Forest Service and private sources. It has been determined that the aerial application of fire retardant does not pose a risk to the health and safety of the general public, or fire fighters. (EA pages 22-24).

3. There will be no significant effects on unique characteristics, or ecologically critical areas such as historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, etc. The decision on where to apply retardant is made by local Incident Commanders, and is based in part on recommendations and input from local resource advisors with particular knowledge of the local area. (EA pages 18-22).

4. The effects on the quality of the human environment are not likely to be highly controversial. There is no scientific controversy over the impacts of the project. The effects of retardant on the various aspects of the environment have been well analyzed and documented by a variety of individuals, organizations and government agencies. (EA pages 2-5, 12-24)

5. Aerial application of chemical fire retardants has been used by the US Forest Service since 1955. Much research has been conducted on the effects of aerial application of fire retardants. Over 50 years of retardant use, along with effects analysis for the aerial retardant program shows the potential impacts are not uncertain, and do not involve unique or unknown risk. (EA pages 2-5 and 12-24)

6. The decision is not likely to establish a precedent for future actions with significant effects. Standard fire suppression tactics have not been altered or changed. The Guidelines, as approved by the federal wildland fire fighting agencies, have been in place and used since 2000, and are still in effect. (EA pages 2-5)

7. The impacts of aerially applied fire retardant are temporary and localized. There are no other actions identified at this programmatic level that contribute cumulatively to the effects of fire retardant on the human environment. (EA pages 13, 17, 18, 21-22, and 23-24)

8. This decision will have no significant adverse effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. While aerially applied fire retardant can have detrimental effects, it does not adversely affect the significance of a heritage site. During extended attack fire suppression, resource advisors assist incident commanders in weighing potentially adverse effects of aerial application of fire retardant against potential damage from a wildfire without retardant. (EA pages 18-22)

9. The decision should not jeopardize the continued existence of any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species act of 1973. The aerial application of fire retardant will conform to the *Guidelines for Aerial Delivery of Retardant or Foam near Waterways* and the reasonable and prudent alternatives from the National Marine Fisheries Service's and the US Fish and Wildlife Service's biological opinions. The National Marine Fisheries Service's and the US Fish and Wildlife Service's biological opinions affirm that by incorporating the reasonable and prudent alternatives into the final decision, the alternative action will avoid the likelihood of jeopardizing the continued existence of listed species or destroying or adversely modifying critical habitat.

10. The action will not threaten a violation of Federal, State, and local law or requirements imposed for the protection of the environment. Aerial application of fire retardant is consistent with applicable laws including State and Federal Clean Water Act requirements, the Endangered Species Act, and the National Historic Preservation Act. (EA pages 13-22)

Administrative Review or Appeal Opportunities

This decision is not subject to appeal pursuant to Forest Service regulations at 36 CFR 215.

Contact

For additional information concerning this decision, contact:
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ABIGAIL KIMBELL
Chief, US Forest Service

2/18/08
Date