

USFS R3 FIRE PLAN LITIGATION PRIMER

TO: Interested Parties

FROM: Bryan Bird, Forest Guardians

DATE: December 2007

RE: Forest Service Region 3 (Southwestern) Fire Management Plans legal challenge

SUMMARY

Litigation challenging 4 individual national forest units' failure to use fire more widely to control fuels making communities and firefighters safer. Coming off a fire season that extended well into November and with unprecedented numbers of people building homes in fire-prone areas, it is time for a completely new game plan for living with fire in the West. Current fire plans call for suppression in nearly all situations, whereas allowing natural fire to burn itself out safely would lead to healthier forests and significant taxpayer savings.

FORUM AND PARTIES

Forum United States District Court
District of Arizona - Phoenix Division
401 West Washington Street
Phoenix, AZ 85003-2146

Plaintiffs Forest Guardians

Defendant U.S. Forest Service

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DESCRIPTION

1. BACKGROUND

a. The Fire Management Plans

Forest Service policy requires national forests to prepare and approve Fire Management Plans (FMPs) for every acre with burnable vegetation. FMPs are “zoning” documents that provide the underlying direction for fire management activities including fire suppression, prescribed burning, fuels reduction, post-fire rehabilitation and Wildland Fire Use. Wildland Fire Use (WFU) is the management of naturally-ignited (i.e. lightning) wildland fires in appropriate circumstances to reduce hazardous fuel buildup that could lead to unnatural fires and unsafe conditions for human communities and firefighters. In addition, the plans detail organizational and budgetary needs to implement an effective fire management program. Finally, the plans provide guidance for monitoring and evaluating FMP implementation. The plans are to be updated regularly, with more substantial rewrites occurring as indicated through regular monitoring and review.

Some FMP zones require suppression of wildfire in every circumstance, while others allow some degree of WFU under certain conditions or human- ignited prescribed fire for resource management. By allowing some fires to burn, land managers can reduce the cost of fire suppression, restore fire-adapted ecosystems, prevent hazardous fuel accumulations, and safeguard firefighters. If FMPs reflected science and current Forest Service fire policy rather than limiting fire use only to the most remote regions, managers would have more flexibility to manage fires, thereby reducing future risk, safeguarding firefighters and saving millions in tax dollars.

b. Legal History

Recent California District Court decisions make clear that FMPs are subject to NEPA. The lawsuit filed by Forest Guardians challenges the Fire Management Plans in the Southwestern Region for NEPA and ESA violations. Forest Guardians alleges the Forest Service violated NEPA, 42 USC 4321 *et seq.*, and its implementing regulations by failing to analyze the environmental impacts of the FMPs in an Environmental Assessment (EA) or Environmental Impact Statement (EIS) and failing to solicit public comment

This very issue was recently decided in the Northern District of California in *People of California ex rel. Lockyer v. U.S. Forest Service*, Slip Copy, 2005 WL 1630020, N.D. Cal., 2005 (not reported). There, the Attorney General of California challenged the Forest Service’s Sequoia National Forest FMP because the agency did not prepare an EIS before approving the plan. The court concluded FMPs are “major federal actions” that may have significant environmental impacts. As a result, it decided that the Forest Service’s “decision not to conduct any environmental review was unreasonable.” *Id.*

The Northern District of California issued a nearly identical NEPA holding in *Environmental Protection Information Center et al. v. United States Forest Service*, No C-02-2708 JCS, 2003 WL 22283969 (Sept. 5, 2003) (not reported).

In addition to failure to comply with NEPA, the Forest Service violated the ESA when it failed to consult with the U.S. Fish and Wildlife Service (FWS) regarding impacts to listed species or to designated critical habitat prior to issuing its FMPs and failed to ensure that its FMPs do not jeopardize listed species or destroy or adversely modify critical habitat. 16 U.S.C. § 1536(a)(2).

2. GOAL

The goal of the lawsuit is to improve fire management plans to facilitate more use of natural fire under safe conditions to control the buildup of fuels and increase community and firefighter safety while encouraging healthier forests. The lawsuit will compel the Forest Service to meet the terms of the NEPA and the ESA in regards to Fire Management Plans. As a practical matter better FMPs will include scientific justification, public participation, and environmental analysis (e.g. different mix of fire v. mechanical fuel reduction treatments and full suppression v. the option for managed wildland fire use). Forest Guardians strongly believes that the actions described above will result in democratic and transparent national fire management policy and plans and increased human safety as well as improved ecological conditions.

3. ECOLOGICAL IMPACTS OF FIRE MANAGEMENT

Fire as a natural regulator of forest systems is generally absent from the forest restoration dialogue , as water flows is often absent from the river restoration dialogue or wolves are to controlling elk and deer populations and therefore grazing pressure on riparian ecosystems. However, returning fire to these fire-dependent ecosystems arguably should be an explicit objective. Rapidly changing climate and enduring drought in the West further elevate the necessity for scientifically-informed fire management plans.

There are numerous impacts on threatened and endangered species (T&E species) that may be affected by the Forest Service's fire management decisions. In the state of Arizona there are 39 animals listed by the USFWS in the Threatened and Endangered Species System (TESS); the State of New Mexico lists 33 such species. 18 plants are listed in the TESS in Arizona, and 13 are listed in New Mexico.

Fire suppression in its many forms (e.g. chemical fire retardant, dozer lines, hand lines, etc.) can result in negative impacts on listed species. The decision to suppress fire can inhibit the development of habitat for T&E species as well as their prey. WFU can have beneficial effects on T&E species, their habitats as well as the habitats of their prey. Failure to implement adequate WFU may result in negative impacts on T&E species by inhibiting the development of their habitats and the habitats of their prey.

Fire retardant used by the Forest Service in its suppression efforts is manufactured from fertilizer, and has in the past contained sodium ferrocyanide as a corrosion inhibitor. When sodium ferrocyanide is mixed or dissolved in water and exposed to UV radiation, it breaks down to form hydrogen cyanide (HCN), which is extremely toxic to aquatic life, and cyanide ions (CN). The cyanide that frequently results from chemical fire retardant is in addition to the natural amounts of cyanide that is released during wildfires. All fire retardants and foams used by the Forest Service,

not just those containing sodium ferrocyanide, can be harmful to the aquatic environment. The fertilizer contained in long-term retardants consists of ammonia and phosphate or sulfate ions. Studies show that a single retardant drop directly into a stream may cause a sufficient ammonia concentration in the water to be lethal to fish and other aquatic organisms.

There are 29 species of fish in New Mexico and Arizona that may be sensitive to the effects of fire suppression including sediment delivery from soil disturbing activities such as fire line construction as well as the direct impacts of hydrogen cyanide poisoning.

There are T&E species which benefit from various degrees of fire on the landscape and suppression of fire or the lack of adequate WFU may negatively impact these species, their habitat or their prey species. For example, patchy burn patterns may create ideal foraging habitat for the Mexican spotted owl.

Several reports assessing the effects of fire on Mexican spotted owl (MSO) habitat have suggested that low- to moderate-intensity wildfires did not adversely impact occupancy. (Yasuda 1997; Scott 1998; Jenness 2000). In fact, fire may be beneficial for owls because of the “mosaic” of successional stages that result leading to enhanced prey diversity and density as well as easier hunting.

Data from 15 years of research on the spotted owl and fire impacts, including Arizona, led scientists to conclude that spotted owls have the ability to withstand the immediate affects of fire at primarily low to moderate intensities and that the owl may be adapted to survive wildfires of various sizes and severities. (Bond et al. 2000).

In addition to spotted owls, research indicates that other birds and even stream insects respond well to wildfire in healthy forest ecosystems. (Minshall 2003; Johnson and Wauer 1996). However, when forest systems have a history of intense management and are less than healthy, more time is necessary for aquatic insects to recover and any additional impacts including fire suppression and recovery efforts may worsen the situation. (Minshall 2003).

4. ADDITIONAL EXPERTS

- Jon E Keeley Ph.D., Research Ecologist, USGS (559) 565-3170
- Stephen J. Pyne Ph.D., Regents' Professor, Arizona State University, (480) 965-4092
- Timothy Ingalsbee, Ph.D., Fire Ecologist, (541) 338-7671

5. FREQUENTLY ASKED QUESTIONS

1. How does climate change and drought affect fire management? Scientists are largely in agreement that rapidly changing climatic conditions and enduring drought are leading to longer and more destructive fire seasons in the West.¹ This emerging information is critical to developing sensible and cost-effective fire management plans that ensure human safety

¹ See New York Times. March 27, 2007. *Heat Invades Cool Heights Over Arizona Desert*. By Timothy Egan; Christian Science Monitor. April 5, 2007. *Surviving a Warmer World: Global Forecast is 'Mostly Dry.'* By Peter N. Spotts.

while recognizing the futility of attempting to suppress all fire. As we prepare for mega-fire seasons, how can we most efficiently protect lives, structures and resources?

2. Aren't firefighting costs exploding? The U.S. Forest Service's fire fighting budget regularly tops \$1 billion and the majority of costs are directly linked to protecting private property. There is little doubt among scientists that climate change and drought will lead to longer fire seasons and higher-intensity fires. Suppressing all fire is no longer an option. Fire Management Plans provide the public an opportunity to rein in the exploding costs of suppressing 98% of all fire on national forest lands. There are more efficient strategies for managing fire on public lands and funds must be directed at protecting communities and ensuring the safety of firefighters. The federal government and the states are currently engage in a discourse over who should be responsible for the growing costs of fire fighting.²
3. What do fire management plans have to do with democracy and government transparency? NEPA provides Americans one of the most fundamental means of practicing democracy and participating in decisions affecting our national forest lands. The Fire Management Plans dictate where and when fires will be put out, where they will be employed to effectively manage fuels, and how much money will be spent on suppressing fires. The public and non-federal government agencies have a right to engage in this process and through NEPA determine how effectively and efficiently their tax money is being spent by the federal government: basic government transparency.
4. How can fire management plans affect firefighter and community safety? We can't fireproof forests, but we can fireproof communities. Fire management plans should determine where firefighters can safely suppress fires and defend human communities and residents should have some influence on where limited funds are going to be spent suppressing fire.
5. What science should fire management plans incorporate? Western forests evolved with fire; fire is as important to these forests as rain is to a rainforest. When we suppress 98% of fires, we are depriving forests of a life force that renews and restores. Further, fire is the most cost-efficient tool we have to manage forest fuel buildup in a time when funds are extremely limited. Sound forest management requires scientifically justified fire management plans.

6. RELATED LEGISLATIVE ACTIONS

Senator Diane Feinstein (D-CA) introduced the Fire Safe Community Act on November 16th 2007, which "establishes incentives for communities at risk of wildfires to adopt a new model Fire Safe ordinance that will set national standards in building codes, creation of "defensible space" around homes, and reduction of hazardous fuels. It also includes new federal grants to local communities, and increases federal reimbursement of firefighting costs to participating communities" This act is

² See E&E Daily, January 31, 2007, *Forests: Senators, Bush Admin Say Growth Partially To Blame For Fire Costs*. By Dan Berman; Also see New York Times, January 3, 2007. *As Costs of Wildfires Grow, So Does a Question: Who Should Pay?* By Kirk Johnson; And see Denver Post. April 3, 2007. *Flame-plagued Summers in Forecast*. By Katy Human.

groundbreaking in that it puts money where it belongs with local communities and homeowners to protect themselves.

Senator Jeff Bingaman (D-NM) sponsored the Community Forest Restoration Act of 2000 (Title VI, Public Law 106-393) which established a cooperative forest restoration program in New Mexico to provide cost-share grants to stakeholders for forest restoration projects on public land to be designed through a collaborative process. One of the primary objectives of that Act is the reestablishment of historic fire regimes.³

7. FACTOIDS

- From 1500 to 1800, an average of 145 million acres burned every year nationwide – about 18 times the recent annual burn total (USDOJ 2001). By the 1930s, 50 million acres in the lower 48 were burned annually by wildfire and by the 1970s the number of acres had dropped to 5 million (USDA and USDOJ 2000).
- Recent annual average acres burned in fires in the lower 48 is closer to 10 million.
- October 1871, Peshtigo, Wisconsin and Michigan: 3,780,000 acres burned and 1,500 lives lost.
- August 1910, Great Idaho, Idaho and Montana: 3,000,000 acres burned and 85 lives lost.
- 2003 Southern Californian fires: 750,000 acres burned, 3,361 homes destroyed and 26 lives lost.
- October 2007, Southern California wildfires: 500,000 acres burned and 1,500 homes destroyed and 9 lives lost.
- Forest fires release carbon dioxide and carbon monoxide, both of which are greenhouse gases. However, all of carbon released in a fire is carbon that has been cycling back and forth between forests and the atmosphere for millennia. Fire or decay releases carbon to the atmosphere, and regrowth ties it back down. Fire changes the location and the state of carbon in the system, but it does not change the amount.
- When a forest fire burns, typically only about 20 percent of the biomass is consumed by fire and converted to gaseous carbon. The majority of biomass remains on site as dead trees, live trees, and as charcoal. Importantly, about 5-10 percent of the biomass killed by wildfire is converted to charcoal, a uniquely stable form of carbon which, if mixed into mineral soil or washed into water bodies, will remain there for thousands of years. Over millennia, charcoal formation makes a forest exposed to fire ‘carbon negative.’ In other words, over the long run, fire may help forests /store/ carbon, not release it.

³ <http://www.fs.fed.us/r3/spf/cfrp/pdf/publaw106.pdf>

- Some 85 percent of the land around western communities with the highest fire risk is privately or state owned. Yet the bulk of federal funds for wildfire preparation is spent on federal lands.⁴
- The protection of a home depends entirely on treatment of the *home ignition zone* — the home itself and the area within 60 meters (200 feet) of the home.⁵
- According to Jack Cohen, research scientist with the Forest Service’s Fire Sciences Lab in Montana and the nation’s leading expert on home ignitions, “The evidence suggests that wildland fuel reduction for reducing home losses may be inefficient and ineffective. Inefficient because wildland fuel reduction for several hundred meters or more around homes is greater than necessary for reducing ignitions from flames. Ineffective because it does not sufficiently reduce firebrand ignitions.”⁶

8. RECENT MEDIA COVERAGE

Former FS Chiefs say fire costs eating budget. By Perry Backus. May 5, 2007. The Missoulian.

The U.S. Forest Service’s budget is going up in smoke.

As wildfires across the nation continue to get bigger and burn longer, the agency has been forced to spend a larger portion of its overall discretionary budget to pay for firefighters, helicopters and air crews.

Five former Forest Service chiefs recently told congress those soaring costs are affecting everything from campground maintenance to research on national forest lands.

“As chiefs of the U.S. Forest Service from 1979 to 2007, we wish to express in the strongest way that the Forest Service has been put into an untenable financial situation due to the way fire suppression funding is being handled in the federal budget,” their statement said.

The Fire This Time. By Bryan Walsh. Thursday, Oct. 25, 2007. Time Inc.
<http://www.time.com/time/magazine/article/0,9171,1675624,00.html>

Even when we try to be smart about fires, we often just make things worse. For more than a century, the U.S. Forest Service--the federal agency responsible for combating wildfires--has pursued a policy of stamping out blazes wherever they occur and doing so all the more aggressively as population grows in the endangered regions. For those accustomed to living in urban areas, that makes sense--the job of a city fire department is to stop blazes before they damage property. But that's not how things work in the great Western forests. Paradoxically,

⁴ The Wilderness Society, March 11, 2003. Communities at Risk from Wildfire: How Much is on Federal land?

⁵ Cohen, Jack D. 1999. Reducing the wildland fire threat to homes: where and how much? Proceedings of the symposium on fire economics, planning, and policy: bottom lines. USDA Forest Service Pacific Southwest Research Station. Gen. Tech. Rep. PSW-GTR-173. Pgs. 189-195.

⁶ Ibid.

trying to put out every minor blaze may raise the risk for the occasional megafire since the forests are not permitted to do their important work of occasionally clearing out accumulated vegetation. This is a little like letting newspapers pile up in your kitchen: if a fire occurs, the place is primed to blow. "These larger and more severe wildfires are an unintended consequence of a suppression policy that doesn't work," says Richard Minnich, a wildfire ecologist at the University of California at Riverside. "If anything, suppression actually endangers society."

Firefighters battle blazes with new tools: Computers and satellites help to detect and monitor fires during a bad wildfire season. By Brad Knickerbocker. July 06, 2006. The Christian Science Monitor. <http://www.csmonitor.com/2006/0706/p02s01-usgn.htm>

In addition to more sophisticated equipment, firefighters increasingly use techniques other than the traditional goal of dousing every blaze by 10 a.m. the next day. One is called "wildland fire use," or managing (some say "herding") remote fires without aggressively suppressing them. The idea is to use fire as a natural force to restore and maintain the ecological health of forests - clearing areas in a controlled way to reduce the risk of future catastrophic fires.

Blazed and Confused. By C. J. Fotheringham, Jon E. Keeley and Philip W. Rundel. November 3, 2007. The New York Times. <http://www.nytimes.com/2007/11/03/opinion/03fotheringham.html>

In the last century, a greater proportion of Southern California has burned than that of any other part of the country. Chaparral shrublands — not forest — cover much of our landscape and account for the vast majority of what burns. The United States Forest Service, which devotes more than half of its budget to fire-related activities, spends most of that money to protect residences built in these shrublands.

Yet we have just seen, for the second time in less than a decade, wind-driven fires causing at least \$1 billion in damage. The magnitude of these events makes it clear that it is time to re-evaluate the wildfire problem and how we deal with it as a matter of public policy.

The Long Burn: Warming drove recent upswing in wildfires. By Ben Harder. Science News Week of July 8, 2006. <http://www.sciencenews.org/articles/20060708/fob1.asp>

"Newer policies, including the Bush administration's 'Healthy Forests' initiative, have emphasized clearing brush, trees, and other fuels near vulnerable areas." "But the new data, Millar says, 'point a finger at warming, rather than grazing or a history of fire suppression,' as a cause the trend toward increasingly severe forest fires." "This trend will not go away unless the trend in temperature turns."

Wildfires: Should taxpayers pay for those who build mansions in 'the stupid zone'? By Patty Henetz. The Salt Lake Tribune.

All of those dream homes that are sprouting up at the edge of national forests in Utah and elsewhere in the West are creating a nightmare for the U.S. Forest Service. Increasingly, the

federal agency is raiding its bank account to douse wildfires at the expense of some of the public's favorite outdoor programs. A new analysis of the Forest Service budget shows the agency, already staggering under stagnant funding, might soon spend virtually all of its average annual \$4.5 billion federal appropriation fighting fires that threaten homes on the rim of national forests.

Firefighting costs ablaze, audit finds. By Tom Knudson. December 17, 2006
http://www.knoxnews.com/kns/national/article/0,1406,KNS_350_5221853,00.html

The Forest Service spends enormous sums defending communities along the edges of national forests in the rapidly developing "wildland-urban interface" zone. Up to 90 percent of the cost of fighting large fires is in protecting private property, which drains money from protecting public resources, such as endangered species and water quality.

"Despite abundant evidence that natural wildfire reduces hazardous fuels," the Forest Service still puts out nearly all fires, in part because it is rooted in "a culture of fire suppression." Unless officials restore wildfire more frequently to the landscape, vegetation will thicken and "environmental damage and suppression costs are certain to escalate."

The agency's own efforts to control expenditures - through cost-containment reviews - have failed because Forest Service managers are not required to correct problems and findings are not distributed widely enough.

As Costs of Wildfires Grow, So Does a Question: Who Should Pay? By Kirk Johnson. January 3, 2007. The New York Times.
http://www.nytimes.com/2007/01/03/us/03fire.html?_r=1&ei=5094&en=5e0d...&oref=slogin

Still, money is only part of the issue, he said. Communities and developers in the West should be thinking in new ways as well, he said, including the use of fire-wise construction techniques and preparedness plans that involve residents in their own defense even before fires start. Many land experts say hardly anyone is addressing the most tangled and emotional question raised by the debate: how much or how little voice federal land managers should have in land-use decisions.

Forest fire strategy: Just let it go. By Tom Kenworthy. November 06, 2006. USA TODAY
Their reasoning is that fire is a natural part of the landscape that clears out underbrush and small trees and creates forest openings in a mosaic pattern. Such conditions help keep small fires from growing into the kind of large, catastrophic blazes that have become increasingly common in recent years. They now say that decades of aggressively fighting fires was a mistake because it allowed forests to become overcrowded and ripe for fires nearly impossible to control.

"The mentality is changing," says Greg Aplet, a Denver-based fire scientist with The Wilderness Society, a national environmental group. As fires have burned more acres in recent years and the cost of fighting them has soared, "the obvious answer is not to fight fires we don't need to fight," Aplet says. Almost 9.5 million acres have burned so far in 2006.

The shift in thinking was formalized in a 1995 statement of federal fire policy, and strengthened in a 2001 revision. The policy recognizes that fire is “an essential ecological process,” and that decades of trying to keep fires from burning have led, ironically, to “larger and more severe” conflagrations because of the buildup of underbrush and other fuel.