

Smokey Needs A Brand New Bag: **A Call to Reform Public Land Fire Suppression**

By Felice Pace

It was October, 1987 and in Big Meadows, deep in the Marble Mountain Wilderness, crews were building a fire line. The line was not complete, yet word had come down from incident command that in 24 hours, the south side of Wooley Creek from Big Meadows west, comprising about 1/5th of the wilderness area, would be backfired. The next morning it was snowing in Big Meadows. The wilderness had received a reprieve.

Elsewhere on the Klamath, where over 260,000 acres burned in 1987, firefighters were pushing new roads and bulldozer lines into roadless areas, felling thousands of old growth trees in wilderness areas, and lobbing fire bombs across the Klamath River, igniting crown fires that raged through the Titus and Johnson roadless areas. While fighting the Baldy Complex, air tankers accidentally dumped retardant into Clear Creek, killing 500 summer steelhead. Clear was one of a handful of streams remaining in California which still had water quality sufficient to sustain summer steelhead. When rain and snow finally ended the fire season, the cost of fighting the Klamath fires added up to about \$20 million, and many locals had new pickup trucks.

In 1994, a lightning fire broke out in the Dillon Creed roadless area adjacent to the Siskiyou Wilderness. At first the Forest Service took aggressive suppression action. However, fighting fire in the steep side canyons was soon recognized as being extremely dangerous. Sensitized by recent firefighter deaths in Colorado, the Forest Service pulled back to the surrounding ridges, built a fire line and backfired. The wildfire itself snaked around in defacto wilderness for weeks and never reached most fire lines. Flying over the area that fall, I was jubilant to find that, with the exception of the burn-outs and backfires lit by the Forest Service, the Dillon Fire had behaved in classic fashion – mostly under-burn punctuated with patches and linear “runs” of hotter crown fire.

The one aggressive fire line pushed far into defacto wilderness during the Dillon Fire was known as the “Hail Mary” line, which held during the Dillon Fire. The next year, however, a crew of college students working seasonally for the Forest Service were conducting Marbled Murrelet surveys in Dillon Creek in preparation for salvage logging under the infamous “Salvage Rider”. Thinking his morning warming fire was out, one young man climbed back to join the rest of the crew on the ridge in time for lunch. That afternoon, fanned by summer canyon winds, the warming fire smoldered to life near the Hail Mary fire line. Although commercial logs had been removed from the fire lines and sold, fire line slash, consisting of small trees and branches piled on the side, away from the Dillon Fire, had been left in place. When the escaped warming fire reached this slash, it “blew up” and raced to the ridge. The Pony Fire killed almost every tree it touched.

Another 1994 Klamath fire was the Specimen fire in the Salmon River country. Among other impacts, either the suppression activity or the subsequent salvage logging introduced spotted knapweed to the watershed. The rapid spread of this aggressive non-native plant along river bars has prompted the Forest Service to propose toxic chemical spraying to “eradicate” the plant. The worst of fire suppression mentality has spread. We now have a “war on weeds” to complement, and perhaps eventually supplant, the war on fire.

In late summer 1999, lightning ignited what became another large fire in the wild central portion of the Klamath Mountains. This fire burned mostly in the Trinity Alps Wilderness, where, apart from backfires, it too was a beautiful mosaic of under-burn, punctuated by patches and runs of hotter fire. Analysis of daily fire records, which the Forest Service resisted providing, confirmed that once again the most intense crown fires were actually “backfires” and “burnouts” lit by firefighters. In this remote country, most of the fires were ignited by “helitorch” – a helicopter-mounted device that drops bombs of flaming gel into the forest. The work is not precise, particularly in mountain country.

The Big Bar-Megram Complex cost about \$100 million and, once again, it was fall rain and not the suppression activity which put the fire out. Subsequent analysis indicates that most of the damage to watersheds, wilderness values, and the forest itself was not done by the fires, but by suppression actions such as fire lines, back-fires, burnouts and retardant dumps. Another firefighting effort in California during the 1999 fire season – the Ventana Wilderness fire suppression effort on the central coast – also cost in excess of \$100 million.

As I write this, millions of acres are burning across the West in the worst fire season in decades. The cost of suppression efforts for the 2000 fire season is expected to top \$1 billion. Back fires lit by the Forest Service near Los Alamos, NM, and elsewhere have blown out of control, destroying hundreds of homes and entire residential communities. Fire managers now admit that only the coming of fall rain and snow will put the fires out.

In the wake of the Los Alamos fire, Interior Secretary Bruce Babbitt, Agricultural Secretary Dan Glickman, and Forest Service Chief Mike Dombeck have promised a “full review” of federal fire suppression, and fire risk reduction policies and procedures. Meanwhile, public land logging promoters, including Senators Gordon Smith of Oregon, Pete Dominici of New Mexico, and Larry Craig of Idaho, take every available opportunity to blame logging reduction for the fires. Look for Gordon Smith to lead a concerted effort next year to increase logging in the name of fire risk reduction, while providing the timber sales with exemption from compliance with environmental laws. Presidential Candidate George Bush has also weighed in, echoing the Timber Industry message that logging reductions are to blame for the wildfires.

Opportunities to reform public land fire suppression policies and practices do not come very often, nor will reform come easily this year. Nevertheless, Public Land activists need to seize the opportunities which this fire season offers to engage the Administration, Congress, and the

American People on the issue of fire suppression and the related issue of fire risk reduction. To be most effective, however, we will need to work in a coordinated, if not totally united, manner. As always, we must insist that the best available science is applied in developing general reforms and specific actions. Above all, we must use this opportunity to expose and discredit the myths and oversimplifications which have mystified and muddled western fire policy.

Good reform must be grounded in and respond to key realities. A survey of research on western wildfire and the collection of fire histories from informants and Forest Service records leads to the following conclusions:

- Fire behavior is 70-80% governed by weather, only 20-30% by fuel and forest conditions. As a result, there will always be high intensity fires and firestorms, especially during extremely dry years and extended periods of drought. For example, one of the most devastating fire years occurred in the early 1900s, before fire suppression was fully operational or effective.
- Fire suppression has not been equally effective across the landscape. In areas near main roads and ranger stations, suppression has been effective for at least 60 years. In most wilderness areas, however, fire suppression has only been effective for a decade or two; while in remote backcountry areas, suppression has never been effective.
- The impact of fire suppression on fire behavior has been greatly exaggerated. For example, even when fire weather is extreme, as much as 60% of many forest fires are low-intensity under-burns. While there has not been systematic study, anecdotal information suggests that “backfires” and “burnouts”, lit by agency firefighters burn with greater intensity than the natural fires they are intended to stop. In 1987 on the happy Camp Ranger District Forest Service personnel lobbed fire bombs across the Klamath River, igniting crown fires that raged through the Titus and Johnson roadless areas. Extensive analysis of the 1999 Big Bar Fire Complex on the Shasta-Trinity and Six Rivers National Forests found that at least 25% of the large fire area was actually burn-outs lit by firefighters. These burn-outs included the most intensively burned forests and the fires that threatened Willow Creek and Hoopa.
- Many of the fires which firefighters can put out should probably be allowed to burn, because conditions will not produce a crown fire or threaten homes and communities. On the other hand, suppression actions are often not effective on the largest fires which are burning the hottest, and which pose the greatest threat to homes and communities.
- Historically, logging has been the single activity most responsible for the increased incidence of catastrophic wildfire on western public lands. Both research and experience confirm that landscapes where logging has been prevalent typically burn hotter than

similar stands which are not near clear-cut plantations. While many foresters assert that careful thinning can reduce fire danger, systematic studies designed to confirm or refute these claims have not been done.

- The realities of timber economics and logging technology dictate that logging can not serve as an effective tool to reduce fire risk. In the global timber economy, operations in the interior West can't compete with plantation-produced, ocean-shipped logs and lumber from New Zealand, Chile and other countries. Logging and transportation costs are simply too high in the remote areas of the western USA. Even where the economics "works", and where logging is subsidized, economics typically dictates reducing shade canopy to 40% or less. Under these conditions, highly flammable small trees, grass and brush sprout more readily and grow faster. In addition, opening the forest to sun and wind reduces humidity in the forest, drying out the wood that fuels fires. As a result, thinning typically leads to increased fire risk.

Logging technology now makes it possible to log smaller trees but, in most situations, the smallest trees as well as limbs and branches, can't be economically removed from the woods. As a result, even the most careful thinning increases the short-term risk of a hot crown fire.

- Fire suppression activities (which include backfires, burnouts, bulldozed fire lines as much as 100 yards wide, bombing with toxic fire retardant and, increasingly, logging of big trees from roadsides and fire lines) often do more damage than the fires which they are meant to suppress. This is especially true in the wilderness and other remote, backcountry areas where non-local crews often become disoriented. Informants tell of fire lines built in the wrong places and backfires ignited at the wrong times. Furthermore, the agencies now employ fleets of helicopters – many leased from timber companies – which are tuned loose with "heli-torches" to start backfires and burnouts. Helicopters are also used to move men and supplies into designated wilderness areas. Heliports – often miniature clear-cuts up to an acre in size – are proliferating within designated wilderness. No one knows how many heliports have been constructed by firefighters in wilderness areas. However, during a single, small fire in the Marble Mountain wilderness, five heliports were recently constructed. Modern firefighting, which resembles all-out war as much as anything, can't wait for firefighters to hike into the wilderness, or for the pack train to bring in supplies. The large helicopters typically used in modern firefighting are also sometimes assigned to logging big trees from fire lines in the name of safety. Finally, men and equipment brought from locations across the country, too often bring with them invasive non-native plants and pathogens.
- Fire fighting cost have skyrocketed, largely as a result of the increasing use of military technology and sophisticated equipment. Fire managers and planners use expensive infrared images taken by sophisticated government aircraft and satellites to track fires and map fire intensity. I have noted above the increasing use of large logging helicopters. A

single logging helicopter and its crew leases for over \$100,000 per day. A single fire can (and has) cost more than \$100 million to fight and, even when this amount is spent, there is no guarantee that the fire will be put out before the coming of winter rain and snow.

- Firefighting is now by far the single activity most responsible for the degradation of designated wilderness in the American West. Those of us who live in or near national forests now fear wilderness fires not because of the damage the fires do, but rather because of the devastation which massive, military-style fire suppression visits on wilderness. While it has become common to speak of “catastrophic wildfire”, in reality it is agency fire suppression insanity and not natural forest fire which constitutes the true “catastrophe”!

When one rejects facile generalizations and the “conventional wisdom” promoted by the fire bureaucracy and timber industry, and confronts the realities of western wildfire, it becomes crystal clear that major reform of wildfire policy and practice is overdue. It will be difficult, however, to achieve the needed reforms. An entrenched fire bureaucracy, the inertia of big agencies and conventional wisdom, a sensational press fanning the flames of fear, and a political process awash in timber industry political contributions, do not inspire confidence that positive change is on the horizon. Indeed, to have a chance of success, the forest activist community must secure allies, unite them in strong coalition, formulate a strategy that includes discrete and sequential steps, and realize that it may take a decade or more of committed work to accomplish all needed reforms.

Who will be our allies? On the top of the list should be scientists – fire scientist to be sure, but also water, soil and biological scientists who can document the immediate and ongoing impacts of fire suppression. If the environmental community begins agitating for reform, the scientists will respond. We should also not ignore firefighters. Some of our top forest activists and fire scientists got their start in the forest as firefighters. Many firefighters, particularly those with the most experience, realize the folly and destructiveness of modern, military-style fire suppression. Finally, and perhaps most importantly, the residents of rural western communities can be our most effective allies. If we can help rural people - and in particular the “new rural” folk whose numbers increase daily – understand the realities of fire suppression and fire risk reduction, they will support sensible reforms.

Where should we start? I think it makes sense to begin the reform process by taking on fire suppression policies and practices within congressionally designated wilderness and other backcountry areas, while linking these reforms to a new focus on forest communities.

The immediate policy goal should be to have Congress and the Administration mandate “minimum suppression practices” in designated wilderness and other backcountry areas, including a ban on bulldozers, backfires, burnouts and heliports. “Passive suppression” would be the rule in the backcountry; active suppression would be taken only to protect human life, or in

the event that the fire leaves the backcountry.

The new wilderness policy should be coupled with a new mandate for the Forest Service and BLM – educating the rural public about the realities of fire risk reduction, providing substantive assistance to homeowners in “fireproofing” their homes, funding for locally-based agency firefighting crews and grants to local fire departments which can provide both “fireproofing” for homes and quick response when communities are threatened.

This approach makes sense for a number of reasons. First, the agencies, the public, and most of all, the members of Congress recognize that designated wilderness is and should be managed under a different set of rules. Extending this difference to fire fighting, will make intuitive sense to them. Secondly, even the fire bureaucracy realizes that fire suppression costs must be reduced. The budget surplus notwithstanding, a billion dollar price tag for a single fire season is politically unacceptable. Zoning the forest into areas where minimum suppression can be practiced offers the fire bureaucracy a means to substantially reduce costs, increase the effectiveness of fire suppression (it is almost always more effective near roads) and decrease negative public reaction without bringing the entire bureaucratic structure down.

Coupling change in the backcountry with real assistance to forest homeowners, increased funding for local crews, grants to community fire departments, and a new agency mandate will result in substantial support among rural residents who, more than anything, want their homes protected, agency managers who are looking for a purpose and a budget to replace timber production, and local government which is always on the lookout for a way to fund the fire department.

Finally, by providing numerous areas across the West’s public lands, where minimum suppression can be routinely compared to all-out suppression, we would be setting the stage for further reforms.

In conclusion:

At the outset, I used illustrations drawn from specific historical fires to illustrate why reform of federal fire suppression policies and practices is needed. I also discussed the opportunity for reform, which the escalating cost of fire suppression and the 2000 fire season provide. Next, I described the major realities which must govern reform if it is to be meaningful. I then charted a path to reform, proposing that we begin by changing fire suppression policies and practices in designated wilderness and other backcountry areas. I’ve argued that, given the entrenched and moneyed forces which must be overcome, we need allies if we are to be successful. I have also suggested where these allies can be found and how they might be cultivated. Finally, I outlined a strategy for linking minimum suppression in wilderness and backcountry with specific, concrete assistance to homeowners and communities, and a new mandate for the federal land management agencies.

