

Committee on Resources

Subcommittee on Forests & Forest Health

Witness Statement

Reducing the Risk of Wildfire
Testimony by Fred Ebel
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before the
Committee on Resources
Subcommittee on Forests and Forest Health
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Madam Chairman, my name is Fred Ebel, President of the Society of American Foresters (SAF). We are here today to discuss wildfire, and I hope we can move away from assigning blame and toward constructive solutions that can reduce the severity of fire across the landscape.

Long-term Fuels Reduction

The primary cause for the current round of wildfire problems is well known--the prevention and suppression of naturally occurring wildfires. There is little doubt that wildfire suppression was well intended, and that there is still a need for fire suppression to protect human lives and property, and in certain instances to prevent severe ecological damage.

There is growing recognition that reintroducing fire to certain forest ecosystems will be beneficial ecologically, and can reduce the severity and extent of wildfire. Reintroducing fire requires a sound, workable and long-term strategy. It will require consistent funding. In fact, it is imperative that we commit to reintroducing fire over the long-term. If we see an increase in funding for only one year we will simply postpone the inevitable tragedies that will occur. Appropriate strategies will require decades not years.

There is no doubt that we can benefit from increased research to truly understand the magnitude of this problem, and how best to treat it. However, some aspects of the problem are crystal clear: Forests have too many trees and other fuels, which aid the spread of fire into what would typically be fire-resistant trees. The kinds of fires we saw throughout the West are not socially acceptable, and in some cases they are not ecologically acceptable. The kind of fire that benefits some of these systems is relatively frequent, low intensity ground fire that typically reduces fuel hazards, and leaves behind fire resistant trees. Since that type of fire is not present in most of these systems, material that would normally be burned off has accumulated to the extent that we have too much fuel, and wildfires grow too large to benefit these systems, or people. The result is that we cannot simply reintroduce fire to the landscape because the fuel load is too great. We must treat many of these forests with a variety of methods before we can successfully reintroduce fire. For many forests the solution is relatively simple: Reduce forest fuels and return to a low intensity, frequent fire regime that facilitates typical ecological processes.

The *Proceedings from the Joint Fire Science Conference and Workshop*, (1991) indicated that fuel treatments mitigate fire severity. "Although topography and weather may play an important role in fuels in governing fire behavior, topography and weather cannot be realistically manipulated to reduce fire severity.

Fuels are the leg of the fire environment triangle that land managers can change to achieve desired post-fire condition." An example used in the report shows the immediate effectiveness of fuel removal. The 82,000 acre fire in South Dakota's Black Hills displayed extreme fire behavior as it burnt 50,000 acres in a mere few hours. This raging crown fire was halted to a ground fire when it entered an area that had been recently treated with prescribed fire. Firefighters were able to effectively fight the fire and save nearby structures.

A Report to the President in Response to the Wildfires of 2000 recommends various methods for reducing catastrophic wildfire risk, including increased investments in hazardous fuel treatments. Hazardous fuel removal treatments include mechanical removal, chemical removal, manual removal, prescribed fire and any combination thereof. Fire, as a natural disturbance mechanism should be reinstated to avoid a reoccurrence of the predicament we are currently faced with. We are pleased that the report would provide for increased funding to accelerate the NEPA process, ESA consultations, and other federally mandated project reviews and public involvement requirements. We applaud the report's acknowledgement of the role of active forest management in the reduction of the risks associated with wildfire.

Forestry professionals have the ability to restore and maintain low-intensity fire in forest ecosystems. To do so will require the flexibility to use all the forest management tools available and will required adequate funding for an ongoing program. This program cannot be achieved over night but will take decades, and even if it was fully funded and completely implemented there is no guarantee that our forests will become fire proof. Large fires will be a part of our future; we can work to reduce the number of those fires, and the damage they cause.

The Wildland Urban Interface as a Priority

According to the Chief of the Forest Service, approximately 40 million acres of national forest are at high risk of catastrophic fire. In addition to the accumulation of fuels as a result of fire suppression, the *Report to the President* has identified the growing population in the West as a factor making wildfire suppression complex. The report says that of the 10 fastest-growing states in the U.S., eight are in the interior west and that while the national average annual population growth rate is about one percent, the West has growth rates ranging from 2.5 to 13 percent. Many people have moved into forested lands creating a wildland-urban interface (WUI.) The growth of the wildland-urban interface has put more humans and structures at risk, and has increased the occurrence of human started wildfires because more people live, work, recreate, and commute in the interface. Because financial resources are limited, efforts to reduce fuel hazard must be focused on the WUI.

Projects to reduce hazardous fuels, curb the spread of noxious weeds, or stabilize and restore damaged ecosystems in the WUI must be prioritized, planned and implemented across ownership boundaries in order to be effective. If treatments are only conducted on private lands in a watershed, the public lands in a watershed still put all ownerships at risk. Funding provided for these efforts must be made available for expenditure on all lands, federal state and private. It is appropriate to address hazardous fuels and other wildfire risks on private lands through federal cost-shared technical and financial assistance. We must also step up programs to help communities plan and prepare for wildfire through education, outreach and technical assistance, and ensure that local and state initial attack resources are effectively trained and equipped to fight fire in the WUI.

Economics

Reducing hazardous fuels anywhere on the landscape will be extremely costly. Most of the fuel reduction work will be removing small diameter trees that have little commercial value. On the plus side, modern technology has improved the utilization and increased the value of small trees. Logging and milling equipment has been developed to manufacture trees of small diameter. These are the very trees that must be removed from the forest to improve forest health and decrease the occurrence of uncontrollable wildfire. Milling facilities that use this size and type of wood exist in some communities. To continue operation,

these plants must have a stable supply of this timber in the future. With a commitment of a stable supply from the National Forests, these facilities will provide a win-win solution to restoring our public forests to a healthy condition. Our small, timber dependent communities will again benefit from a stable economic environment.

Examples of Restoration

In Northern Idaho and parts of Western Montana and Eastern Washington, the western white pine cover type has been decimated by an introduced disease--white pine blister rust. There has been a ninety percent reduction in this cover type in only five decades. The forest that has replaced the white pine cover type is prone to the large catastrophic fires that occurred this year. Much of this cover type is on national forest lands. Science has helped provide a solution to recovering the white pine cover type by developing rust resistant white pine trees. To reestablish white pine will require thinning the forest and then planting the disease resistant seedlings. Of course, this will be difficult with restrictive management allocations and the implementation of the President's roadless initiative, but we know that it is both possible and necessary.

Another example is the ponderosa pine forests in northern Arizona that were once characterized as open-park like forests, with approximately 50 trees per acre. The open forests were maintained by low intensity, high frequency fires. Changes occurred when fire was removed. These same acres now hold approximately 200 trees per acre (some with as much as a thousand trees per acre). These trees are small in diameter, stacked like kindling and less fire resistant than the larger trees that once occupied the sites. The higher density of small trees and the encroachment of non-fire resistant species has resulted in less frequent, but more intense stand replacing catastrophic wildfire. Again, we know what to do, we just need to create a climate where it is possible. I hope these two examples demonstrate that different forest types require different management techniques. Mechanical thinning and prescribed burning are solutions for certain forest types, other techniques will be needed in different forests.

Rehabilitation

With the fire season winding down, it is now time to focus on rehabilitating and restoring fire-scarred landscapes. It is critical to attack this problem now. There is a small window in which to employ rehabilitation techniques designed to mitigate environmental degradation, and capture some value from these forests. Heavy rains and winter storms will limit access, and could cause massive erosion, flooding, and reduction of water quality.

We must first focus our rehabilitation efforts on critical watersheds aimed at protecting water quality, sensitive species habitat, and restoring ecosystem function. We should also institute a salvage program to reduce fire risk and possible insect and disease outbreaks. A salvage program could also recover some value from this record fire year. Our hope is that Congress will provide the necessary funds to expedite protection within these areas. We believe the agencies should do everything possible to ensure that on-the-ground managers have all the resources they need to accomplish these efforts. This money must make it to the field, where local managers have direct ties to the damaged lands and are well qualified to evaluate the timing, need and scope of rehabilitation and restoration activities.

Land managers currently employ several watershed rehabilitation and restoration techniques, such as those listed in the *Report to the President*; however, the effectiveness of restoration activities is unknown. The *Report to the President* states "the ultimate goal will be restoration of healthy, native ecosystems that will protect public safety, sustain local economies, restore water quality, and ensure perpetuation of natural resource commodity and aesthetic values". This is the appropriate goal, however a recent USDA Forest Service report on *Evaluating the effectiveness of postfire rehabilitation treatments* concludes that there is insufficient research on the effectiveness of various watershed rehabilitation and restoration treatments. The literature suggests that once a watershed is severely burned, the effectiveness of treatments is limited. We must continue to invest in research, experimentation and monitoring the effectiveness of the treatments.

applied to burned over forests. We cannot continue to lose research scientists. The fire research program alone has gone from 60 scientists to 23 in just over 10 years. This is unacceptable when the needs are this great.

This study recommends that managers limit severe burns through active management of forest and wildland conditions. It goes on to suggest that we make investments in research to understand the effectiveness of watershed restoration methods following wildfire. While we must invest in rehabilitation efforts, we must also recognize that proactive strategies to reduce fire risk are far more effective.

We cannot erase the damage that has been caused, but we can utilize management tools to repair damage, minimize resource and economic loss, and reduce the likelihood of future tragedies. The *Report to the President* discussed economic and resource losses incurred at the local level and the importance of engaging local people in restoration and rehabilitation efforts to provide temporary relief. We applaud this emphasis, and believe working with and investing in local communities is key to the success of rehabilitation and restoration programs.

Salvage

Part of any rehabilitation effort must be the timely (preferably within one year) salvage of trees that are dead or dying as a result of these fires. We know salvage has become a dirty word to some, but the Society of American Foresters endorses the proper use of salvage as a necessary tool when professionally applied, with environmental safeguards. Unfortunately billions of board feet of timber were destroyed this summer. We must not overlook the opportunity to reduce some of the losses incurred through salvage.

We have heard that some forests have no plans to salvage burned trees. We hope these rumors are false as the *Report to the President* clearly indicates that a salvage program is appropriate and necessary. Salvage is not a panacea, but provides significant favorable impacts on local communities and their economies and provides significant funds for restoration and rehabilitation projects. As we have already pointed out, salvage can reduce the threat of insect and disease outbreaks that can occur after fires of this magnitude. Carefully designed removal of dead and dying timber can also be utilized in restoration activities that protect watershed functions.

Forest Inventory and Analysis

The catastrophic 2000 fire season has sparked a significant debate over the linkage between wildfire severity and the various management scenarios currently being implemented on America's forestlands. Are wildfires increasing as active management decreases? Do fires occur more frequently in logged or roaded areas? What kinds of fuel treatments are needed to restore forests to a more fire resilient condition?

The answers to these questions lie in consistent, reliable forest inventory data - data that is sorely lacking throughout much of the West. This deficit is particularly evident in the interior West, where most inventory data is fifteen to twenty years old. Increasing our commitment to the Forest Inventory and Analysis (FIA) program is necessary, and this emphasis is currently missing from the *Report to the President*.

To remedy this critical information gap, the Society of American Foresters recommends a one time emergency appropriation of \$4.3 million be added to the Forest Service's Research and Development budget line item. We further recommend that these funds be earmarked to the Forest Inventory and Analysis (FIA) program for the completion of close out inventories and a transition to annualized inventories in the western United States.

Accurate and current inventory data is critical for conducting timely and meaningful analyses on the condition of our forests. For example, a statewide inventory of New Mexico's forests was recently completed. It shows that approximately twenty percent of the acreage, of the national forests in the state, is

too dense and need more intensive thinning of both small and large diameter trees in order to return the landscape to a more natural condition. The remaining eighty percent of New Mexico's national forests needed only lower intensity brush and small tree removal. Unfortunately, most other western states have no such database to inform decision-makers.

In 1998, Congress directed the USDA Forest Service to implement a Strategic Plan for Forest Inventory and Monitoring. Through past Congressional support, the Agency is two years into a five-year implementation program being conducted through the FIA program. The five-year transition period is needed so that baseline inventories can be conducted in the western U.S. prior to implementing the annualized inventory approach. An accurate baseline in these states will facilitate more rapid identification of trends in forest condition across the region and the nation.

A one time emergency appropriation of \$4.3 million in FY 2001 could be used to accelerate the closeout inventories in western states and thereby accelerate implementation of the new annualized FIA approach. These funds would be used to pay for data collection, analysis and reporting, and would result in a complete, published information base for the western U.S. by 2002 - approximately two years sooner than under current plans.

This information base would cover all land ownerships and would serve as a scientific basis for prioritizing areas within the region that need fuel reduction or other treatments to reduce their risk of catastrophic wildfire.

Conclusion

The Society of American Foresters support a long-term strategy which will restore the health of our public forests and reduce the number and severity of wildfires in the future. This strategy will require that resource managers be allowed flexibility, the proper tools, access to the land needing treatment and continuous funding to achieve a healthy, productive and sustainable forest environment.

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