PANEL DISCUSSION: Prescribed Fire: Why Aren't We Doing More? Local, State, and National Perspectives

Prescribed fire has been recognized as a potential tool for land managers for many years. The gradual recognition of the important role of fire in wildlands has been documented many times. In the United States, this recognition probably first occurred in the longleaf pine region of the southern United States. Various agencies that once focussed on fire exclusion gradually adopted the use of prescribed fire as a land management tool. By the late 1970's, many Federal, State, and local wildland agencies were actively implementing prescribed burning programs for purposes such as fuel hazard reduction and wildlife habitat management.

Even though the use of prescribed burning has increased during the past 60 years, present use of this tool falls far short of its potential use given the millions of acres of land in fire-adapted or fire-dependent ecosystems in the United States. This observation begs the question "Why aren't we doing more prescribed burning?" In order to provide several different perspectives on this question, a panel of experts was convened to discuss the issue from the perspectives of local, State, and Federal wildland agencies. Battalion Chief Donald Pierpont of the Los Angeles County Fire Department, Mr. Ken Nehoda of the California Department of Forestry and Fire Protection, and Mr. Jerry Williams of the USDA Forest Service each provided their views on the topic. Many common factors affect the prescribed burning programs of each of these agencies. The following three papers present a summary of this panel discussion.

Prescribed Fire: "Why Aren't We Doing More?" A Local Perspective[1]

Donald A. Pierpont[2]

Abstract: The ability of local agencies to mitigate wildfire hazards through prescribed burning is limited by many internal and external factors. Environmental regulations, public support, and internal departmental problems continue to limit the effectiveness of prescribed burn programs. These elements are discussed to provide a better understanding of why we are not doing more at the local level.

The factors that limit prescribed fire programs on the national and State level naturally affect local agencies as well. Federal and State environmental, air quality, and management decisions are implemented at the local level. The public's perception of these decisions affects our ability to produce modified acreage and mitigate the wildfire problem.

The cooperation of all agencies impacted by prescribed fires is essential to maximizing acreage production. Over the years we have developed excellent relationships with most of the agencies involved, and conflicts are rare. When conflicts do occur, they are usually because of a lack of understanding of the mutual benefits of prescribed fire.

The objective of prescribed fire managers is to improve wildland fire protection; environmental issues are addressed, as necessary, to achieve this objective. When prescribed fires conflict with environmental laws, we rely on enforcing agencies to assist us by identifying ways to mitigate the impact. This assistance is not always available, and developing mitigation methods is very time consuming and certainly affects prescribed fire.

The implementation of the prescribed burn program has required continual public education regarding the benefits and limitations of the program. With 12 years of experience and public education behind us, we have developed a high level of public support. The public's concern about the potential impact of our projects has not diminished, but outright opposition is extremely rare.

While developing a project in Los Angeles County, we identified one property owner who did not want to cooperate. I met with the property owner in an effort to educate him and gain his cooperation. He stated that he was planning to sell his home and did not want to spoil the view. We subsequently attempted to continue with the project and work around his property.

The property owner then took his opposition to every public forum he could think of. He contacted County Supervisors, the City Council, the Town Council, Resource Conservation District, and the media. The public, the politicians, and the media supported the project at each of these meetings. Our long-term efforts in public education had proven successful.

His final effort was litigation. He filed suit, questioning our environmental documentation. Our response required the filing of a negative declaration addressing the environmental issues. The process of public meetings and litigation proved to be very time consuming.

Contracts with cooperating property owners, for prescribed burning, are valid for only 3 years. In this case it took more than 2 years to exhaust this property owner's avenues of opposition, and there was not sufficient time left to complete the project before the 3 year time limit expired. This time limit has impacted other projects as well.

The climate of Los Angeles County is diverse, ranging from the desert to coastal plains. Wildfire season starts as the vegetation dries in the inland valleys, long before the coastal areas are dry enough to burn. The need for resources to combat these inland fires limits our ability to conduct burns along the coast.

The advent of the Paramedic program in 1970, followed by Emergency Medical Technician, Hazardous Materials, and Urban Search and Rescue programs, has dramatically changed fire departments nationwide. Today, only 7 percent of our responses are fire related and less than 1 percent are brush or grass fires. Training is naturally directed toward the areas of greatest demand, and the number of wildland fire experts has declined proportionately. Chief officers are drawn from this diverse background and, of course, reflect their experiences. These changes are also reflected in management and its response to the prescribed burn program.

Today fire chiefs support prescribed burn programs but are extremely conservative in their approach. Prescribed fire managers reflect this conservatism in their selection of projects, the size of burn units, and the conditions under which they are burned.

Every time prescribed fire managers light a match, we are placing our careers on the line.

Conclusion

The public's understanding and demand for prescribed fire continue to grow. The ongoing education of the public, other agencies, and chief officers—combined with the continued success of prescribed burning—will allow prescribed fire programs to be more productive.

[1]An abbreviated version of this paper was presented at the Biswell Symposium: Fire Issues and Solutions in Urban Interface and Wildland Ecosystems, February 15-17, 1994, Walnut Creek, California.

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Prescribed Fire: Why Aren't We Doing More? A State Perspective[1]

Ken Nehoda[2]

Before I try to answer the question "Why aren't we doing more?" I will provide some basic information on the Vegetation Management Program (VMP) of the California Department of Forestry and Fire Protection and what we have done with it.

Although the title might indicate a broader based function, the majority of the program's efforts have been and are currently focused on the prescribed burning of brush-covered lands classified as State Responsibility Area. *The Handbook and Field Guide to the Vegetation Management Program* says, "The goal of the Vegetation Management Program is to reduce the chance of large, damaging wildfires by reducing fire hazards on wildlands in California. Realizing the best mix of natural resource benefits from these lands, consistent with environmental protection and landowner/steward objectives, is the Department's intent."

VMP has been functional since 1981. Here are some statewide statistics:

- The highest amount of acreage burned in a year is about 68,000 acres.
- The lowest amount of acreage burned in a year is about 17,000 acres.
- Average annual acreage burned is about 42,000 acres.
- This year, about 14,000 acres have been burned in 27 projects.
- There are about 100 approved projects waiting to be burned, with a total project area of approximately 106,000 acres.

Over the years, most of the projects burned under this program have been located in fairly rural areas. Prescribed burns have been aimed primarily at fire hazard reduction, wildlife habitat improvement, and range improvement. As a result of this general configuration, many of the burns have been of significant size. More recently, there is a shift away from this type of project toward the urban interface. With this shift to more congested, built-up, populated areas, new issues are showing up. Among these issues are:

- Increased sensitivity toward smoke incidents.
- Significantly higher values at risk in the event of an escape.
- Smaller urban setting projects require as much, if not more planning, resources, and operational effort to conduct.
- Increasing public concern about the risk and potential adverse impacts of prescribed fire.

However, this type of project has the potential to make a difference in saving or losing structures in built-up areas. That, by itself, is enough to merit facing the associated challenges. Fuels management, as a significant component of a professional fire protection program in the wildlands and at the urban interface, is at least a part of the solution to these major fires with significant structure losses.

The Process

The process is normally initiated by one of the following actions. Either the California Department of Forestry (CDF), or its representative, such as a Contract County, contacts a landowner or group of landowners in an area where they would like to develop a project, or a landowner contacts us. Regardless of how it begins, the process must meet all of the administrative requirements. The completed package will include the following information:

1. Prescribed Burning Project Standard Agreement—This is the agreement between CDF and the landowner. If one of the participants in the project is an agency of the United States Government, a "Federal Land Management Agency Prescribed Burning Project Standard Agreement" must be included.
2. The Burn Plan—This is the primary planning document for the project and includes:
    a. General project information, i.e.: landowners' names, parcel numbers, etc.
    b. Burn area description, legal and narrative description of property, zoning, land use, estimate of area to be burned, etc.
3. Environmental Setting and Impacts—This includes general information about the following:
    a. Description of project objectives and methods.
    b. Project area topography, elevation range, slope steepness and aspect.
    c. Soils description and sensitivity to project activities.
    d. Vegetation community and dominant species.
    e. Wildlife/fisheries habitat and sensitivity to project activities.
    f. Cultural resources and sensitivity to project activities.
    g. Smoke and potential impacts to communities.
    h. Project maps.

[1] An abbreviated version of this paper was presented at the Biswell Symposium: Fire Issues and Solutions in Urban Interface and Wildland Ecosystems, February 15-17, 1994, Walnut Creek, California.

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   i. Copies of all letters to other agencies asking for information or concerns they might have with the project and any responses.
4. Burn Prescription—This is the synthesis of all the information gathered about dead and live fuels, anticipated weather, desired effects of the project, and smoke management into a few model inputs so that you may specify conditions which will achieve project objectives.
5. Project Cost Summary—Vegetation Management Program projects are partially funded by participating landowners. This cost sharing formula is defined in Section 1564, Title 14, California Code of Regulations. In summary, it says, "The State's share of such costs shall bear the same ratio to the total costs of the operation as the public benefits bear to all public and private benefits from the operation as estimated by the Director." Subsequent legislation was passed that allows the Department to pay all of the project costs if there are no private benefits accrued to the landowner.
6. Environmental Checklist—This document functions as the initial study for the project. Its completion, according to the California Environmental Quality Act Guidelines and the VMP Handbook, is mandatory.

Why Aren't We Doing More?

This is a deceptively simple question which requires a complicated answer. The complications arise not only from the extremely diverse biological, environmental, and physical conditions that exist in California, but also from administrative, political, and social differences.

Most of the administrative complications arise from program staff within the Department and are differences of opinion about how program requirements are interpreted. From the viewpoint of a program manager, whose duties include trying to ensure that projects meet the requirements and intent of both law and policy, I offer the following comments. Frequently those of us who work in the program at Sacramento Headquarters are perceived to be much too detail oriented. This description is most frequently applied soon after additional information or clarification of issues is requested. I have heard on several occasions that program staff should be inventing ways to approve projects, not to stop them. Since I cannot arbitrarily choose to ignore or modify either the law or CDF policy, I must require compliance which can sometimes result in delayed implementation: therefore, I am part of the problem.

The political issues–and I include "interagency cooperation" as part of this–are also a factor. These issues include working cooperatively with many agencies to address impacts of prescribed fire upon archaeological and cultural resources, fisheries and wildlife habitats, air quality, vegetation communities, and, last but certainly not least, impacts on rare and endangered species of both plants and animals. I have been told by some that agencies with responsibility for managing or protecting these items are not receptive to prescribed fire. That may well be true, but a methodical, educational process that focuses on the benefits that can be provided might change opinions and is preferable to one that is by nature confrontational. As a result of this type of controversy during the southern California fires late last fall, many people are looking at the use of prescribed fire as well as how to improve the political climate and interagency cooperation.

What I perceive to be social issues are those that are not usually founded on the physical impacts of prescribed fire, but are based upon some individual's desire to participate in, and thus influence, the decision-making process. In most of the cases I have dealt with, the people had their own ideas about what they wanted done, and more often than not, they wanted the project stopped. This can complicate the process and that is what I choose to deal with here. Examples include: neighbors who do not really believe that there is a significant risk associated with unmanaged fuels around homes and developments, people who believe that all fuel treatment will result in significantly accelerated erosion, and probably the most common view that wildfires happen "somewhere else" so we do not really need this here. I see this as a need to educate people who live adjacent to project areas. In those cases where individuals cannot be convinced the project is valid, there are mechanisms to go around them. Unfortunately, this means more work, not less. Furthermore, we will not win all of our battles. In most cases, however, the time spent on developing a project will not be wasted.

It appears to me that the answer to the question "Why aren't we doing more?" depends entirely on the experience of the person who provides the answer. In an effort to address the issues, the California Department of Forestry and Fire Protection is exploring ways to simplify the paper flow, increase program flexibility, and improve our working relationships with other agencies. The product of this effort should provide a strong foundation for a dynamic, stable, and functional Vegetation Management Program.

Prescribed Fire: Why Aren't We Doing More? A National Perspective[1]

Jerry T. Williams[2]

USDA Forest Service and fire and aviation management decisions are commonly made in a context of biological, technological, social, legal, and economic considerations. These considerations ultimately define the latitude in which we operate to achieve multiple-use objectives, and they help us answer the question, "Why aren't we doing more?"

These factors are also important in the context of prescribed fire (*fig.1*). We use prescribed fire to meet specific resource objectives—despite that, prescribed fire problems have traditionally focused on prescribed fire practices and policies, but rarely on the primary objectives.

A good example of means becoming confused with ends is illustrated by the prescribed natural fire situation experienced in 1988. After fire problems surfaced, virtually all of the focus centered on the application of prescribed natural fire policy. Few scrutinized the objectives on which the prescribed fire activity was predicated. We did not examine the larger issues attached to the overarching objectives for wilderness and the meaning of those objectives in terms of expected benefits, risks, and consequences.

Underlying the question of "why aren't we doing more" is the larger question of "to what purpose?" Fundamentally, whatever we do must be viewed as worthwhile. The benefits must be worth the risks. This notion becomes especially important to the resource manager because potential benefits may not be clear to the affected public. The risks that inherently surround prescribed fire and the consequences that can result make it imperative that the public have a full understanding of our objectives. If our objective is to sustain short interval fire-adapted ecosystems, why aren't we doing more?

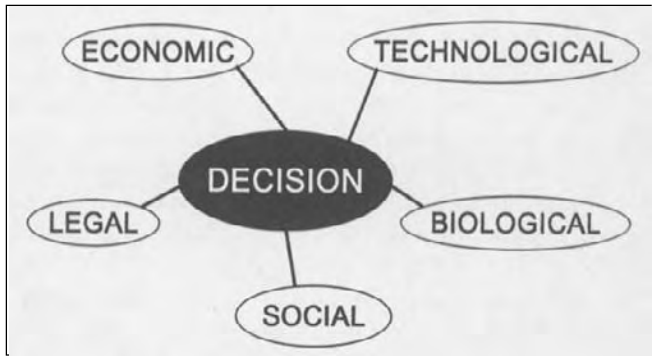

Figure 1–A variety of considerations surround fire management decisions.

Discussion

Biologically, prescribed fire must be included as a management tool in sustaining fire-adapted ecosystems; fire regulates the biotic productivity and stability of fire-adapted ecosystems that cannot be fully emulated by mechanical or chemical means. Prescribed fire is especially important in short interval fire-adapted systems in which the absence of periodic, low-intensity burning causes stands to undergo relatively rapid changes in species composition and structure, which in turn often results in predisposing factors to epidemic insect and disease outbreak and severe stand replacement wildfire. Among conifers, the long-needle pines are a common example of short interval fire-adapted species. Notably, these species account for nearly 30 percent of the suitable timber base on National Forest lands.

Technologically, in most short interval fire-adapted ecosystems, and particularly in the long-needle pine types, the opportunities to use prescribed fire on meaningful scales is limited by narrow prescription windows. Risk and smoke are commonly cited as factors that inhibit more prescribed burning. However, in short interval fire-adapted ecosystems, in the prolonged absence of fire, high fuel loadings, unnatural volumes of biomass, and multi-storied canopies are the fundamental reasons more burning does not take place. These underlying causal factors significantly impede the ability of field practitioners to conduct prescribed burns within acceptable limits of risk. Not to be overlooked, these factors also preclude burning within ecologically appropriate ranges of fire intensity. Before we do more prescribed burning in these situations, we need to give serious consideration to managing understory vegetation and mechanically reducing fuels.

In the social arena, the public does not always understand the rationale for prescribed burning. In fact, much of the country is culturally averse to fire. An exception, of course, is the south and southeastern United States. There, perhaps because long-needle pine forests have the shortest fire return intervals anywhere, cause–and–effect relationships are manifest most rapidly and, therefore, are most obvious. In that part of the country, in the absence of fire, undesirable effects develop quickly. In only a few years, flammability can increase significantly and the habitat for many game animals can diminish rapidly.

[1]An abbreviated version of this paper was presented at the Biswell Symposium: Fire Issues and Solutions in Urban Interfaced and Wildland Ecosystems, February 15-17, 1994, Walnut Creek, California.

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Misperceptions about fire and culturally imbedded fears about fire have a significant effect on the prescribed burning program. People who do not understand the long-term ecological benefits of fire or are unable to see or somehow benefit from the positive cause–and–effect relationships that result from fire are not likely to tolerate the short-term consequences that invariably accompany prescribed burning. A compounding obstacle is the very nature of prescribed burning. We usually do not notice the ones that go well. We almost always notice the ones that do not. In the planning stages, proposed prescribed burn projects are typically affected by the social impacts that may have resulted from remembered smoke incursions and escapes. Risk is a part of prescribed burning. Because failures command scrutiny while successes go unrewarded, most decision-makers, most managers, and most practitioners are cautious and conservative with the use of fire. Prescribed burning on the scales and over the timeframes that are currently under discussion in some circles will be exceedingly difficult in this social and cultural climate.

The legal arena, however, is perhaps the most contentious. The Forest Service mission is, in large measure, based on the Multiple-Use Sustained Yield Act (1960). Although a great deal of focus has historically centered on the multiple-use aspects of this legislation, sustainability is becoming the growing concern. Nowhere is the issue more acute than in short interval fire-adapted ecosystems. Biologically, we know that a successful management strategy aimed at sustaining these ecosystems must rely on prescribed fire. However, whether concern centers on air quality for a community, cover for large game, critical habitat for endangered species, or the desire for seclusion among people living in a wildland subdivision, the growing trend toward single-resource emphasis will preclude the use of prescribed fire. As long as we are legally mandated to manage for discrete components of the ecosystem, we will be unable to manage for the larger whole ecosystem.

Last but certainly not least, economics will also play a significant role in our ability to sustain fire-adapted ecosystems, particularly when we consider the cost of restoration that now confronts us. We should not think that dollars will become available to fund these treatments unless a compelling argument can be made that the cost of restoration and maintenance is worthwhile. The competition for dollars is intense and it is getting more intense. Entitlements, health care, education, and urban infrastructure needs are among the few that will compete for the dollars available to treat fire-adapted ecosystems. In the final analysis, restoration treatments will need to demonstrate a savings, in terms of the costs that are likely to result in attempting to manage under existing forest conditions and the losses that are likely to accrue in the absence of treatment.

Summary

Perhaps the important question is not so much "why aren't we doing more," but rather "what is the reason for needing to do more?" Before we do more prescribed burning, we need to develop a better basis from which to operate. If our objective is to sustain short interval fire-adapted ecosystems, prescribed fire will be a part of that and so will smoke and escapes and expense. We can mitigate potential adverse effects by mechanically pre-treating stands to reduce emissions and escapes. In some areas, before we use prescribed fire, we must make preceding mechanical entries in order to burn within appropriate ecological amplitudes. Treating stands is one thing, but treating landscapes will be difficult and costly.

Nobody likes the idea of the smoke or the escapes or the expense that is a part of sustaining fire-adapted ecosystems with prescribed fire. But, as fire management professionals, we have realized that our suppression capabilities are limited and, although consequences come with using fire, opting to avoid the use of fire carries serious consequences also. In the past decade, under the influence of drought, catastrophic wildfires have consumed what prescribed burning was unable to treat, protect, and sustain.

We are at a crossroads in our ability to sustain fire-adapted ecosystems. This may be the single most important resource issue facing the Forest Service. We are stalled in our efforts to do more prescribed burning. I believe, at this point—because we do not have an adequate anchor, a basis from which to operate—it is less important for our fire managers to advocate the use of prescribed fire than it is for them to know and display the biological, technological, social, legal, and economic tradeoffs and limitations that are involved from among our alternatives. Ultimately, the public will determine what latitudes we are allowed in using prescribed fire. We need to put our energies in providing them with the knowledge they will need to make informed decisions.