



Missouri Society of American Foresters

May 2, 2005

Ronnie Raum
Forest Supervisor
USDA Forest Service
Mark Twain National Forest
401 Fairgrounds Road
Rolla, MO 65401

Dear Ronnie Raum:

On behalf of The Missouri Society of American Foresters, please see our attached comments regarding the 2005 Draft Revised Forest Plan and Draft Environmental Impact Statement. The Society is a member-driven group that represents professional foresters from a diverse array of private for-profit, private not-for-profit, state, federal, and academic organizations. The Society also serves as the official link between the state's professional foresters and the national Society of American Foresters organization.

We would like to compliment your team's effort in assembling the data and presenting the information in an orderly fashion. It made our review effort an easy task. Our comments speak for themselves, but we would like to highlight a few items.

First, the Society finds value in both Alternatives 3 and 4. In support of both alternatives, please refer to the attached policy statement by national Society of American Foresters, "Use of Silviculture to Achieve and Maintain Forest Health on Public Lands". This statement emphasizes that the lack of active forest management has created forests that are more susceptible to a variety of forest health problems. We feel that a reasoned active management plan can help to create vigorous forests capable of withstanding these forest health attacks.

Second, we would like to caution setting an arbitrary time period, such as pre-European settlement, as the ecological baseline upon which to develop plant community restoration efforts. Even within that time period, Missouri's forests were a dynamic, ever-changing ecosystem. We want to encourage you to educate other stakeholders to this fact as you finalize your Plan.

Finally, please pay particular attention to our comments regarding the use of prescribed fire and related smoke management issues. We support the use of prescribed fire to restore past plant communities and forest health. But, we would like to see resulting prescriptions based on eastern fire models and not western data as referenced in the current Draft Plan.

It is our sincere hope that our comments will be a valued input to your forest planning process.

Sincerely,

Dr. David R. Larsen
2005 Chair of the Missouri Society of American Foresters

Enc: Comments and SAF Policy statement.

Below are comments that are being provided by the Missouri Society of American Foresters, Policy and Legislation committee. As a professional society we are particularly interested in making sure that forest management decisions are based on sound, scientifically proven management techniques. The comments were provided by individual committee members and are provided as such.

GENERAL COMMENTS:

Comment #1

Due to the amount and wealth of information and complexity of the numerous documents, we spent the majority of time reviewing Appendix D in the DRAFT ENVIRONMENTAL IMPACT STATEMENT. We did this because we believe the major controversy and concern for the plan centers around the concepts of ecosystem restoration and / or the use of prescribed fire on the landscape.

SPECIFIC COMMENTS RELATING TO APPENDIX D

1. PART III References to the Range of Natural Variability Page D-7

- The plan concentrates on describing pre-European settlement conditions. There is apprehension in many of the publics that we are associated with or serve concerning the concept that pre- European settlement conditions are the desired future conditions for the Mark Twain National Forest. The Draft EIS alludes to, but does not explicitly state why this is true. A suggestion would be, state in bold why the Forest intends to manage toward this desired future condition. These facts might be stated as a preface to the Draft EIS.
- The reference to Pyne 1982 publication on page D-8 in the Draft EIS. Our experience with Mr. Pyne's work is that he discusses and addresses conditions and events in the western United States and not Missouri. We do not dispute the fact that Native Americans influenced the landscape in Missouri and particularly the Ozarks. However, the forest plan needs to state how Native American's influence created a great diversity in both plant and animal communities and that this great diversity is a bench mark of ecosystem health. Furthermore, state explicitly, why the preferred alternative, alternative #3 is the best process to restore ecosystem health. Then follow in the text with the list of those reasons.

2. HISTORIC VEGETATION Page D-8

- The field notes of early explorers are valuable insight into their personal interpretation of existing conditions at the time of their exploration. However, personal biases both at the time of exploration and during today's interpretation of those written documents can be construed as conjecture depending upon one's own personal biases. Furthermore it is somewhat a leap of faith that in today's world the pre-settlement vegetation conditions are what best suits today's society. The plan needs to key on the importance of diversity as it relates to ecosystem health and state why the preferred alternative will lead to greater system

sustainability. It should also state why this specific vegetation condition is what is best for today's society and future generations. If the plan does so in an easily understood method and can be found in the plan readily, additional support for the preferred alternative may be achieved.

3. FIRE Page D-13

- We believe the plan needs to balance the Forest's perceived need to introduce fire into the system at a landscape scale to improve ecosystem health with a certain segment of society's expectation to not degrade forest products through multiple application of RX fire treatments. Forest products are critical for the economic health of many small towns throughout the Ozarks. The forest product industry is the third greatest economic engine within the state of Missouri. This concept should be balanced with the need to restore ecosystem health.
- We take issue with the concept of the fuel reduction burns in the Ozarks. Fuel reduction burns have limited application in the Ozarks beyond burning logging slash or debris created by wind events. Missouri does not have fuel problems such as dog hair stands of Ponderosa or Lodge pole pine as found in the western United States. As stated at the top of the page D-14 in the Draft Environmental Impact Statement, the concept of managing leaf litter accumulation as it relates to smothering other plants etc. should be capitalized upon from a system health perspective rather than a fuel loading perspective. Discuss how RX fire recycles nutrients, creates bare soil and allows plants to utilize additional sunlight. These points may make more sense to the critics of large landscape burning than the concepts of fuel reduction. Elaborate on the change of water holding capacity as stated on the top of page D-17.
- Society needs to be educated on why fire is an important and necessary tool in certain conditions and that wildfire is not a substitute for controlled systematic application of prescribed fire. The public does not understand the difference. The amount of prescribed fire applied to the landscape in any one year needs to be carefully contemplated. The preferred alternative #3 calls for 60,000 acres per year to be treated with RX fire. This is a greater than a 3 fold increase over today's prescribed fire program on the forest. There are critical political implications that need to be contemplated prior to the implementation of an RX fire program of this scale and magnitude. A prescribed fire program of this size influencing this many acres on the Forest will have a distinct and direct effect on agencies such as the Missouri Department of Conservation. As public agency RX fire programs grow in size, interest for private landowners to burn their own property also grows. Many of these private landowners have neither the expertise nor the equipment to safely conduct these types of burns. Escaped RX fire treatments from private land will and does present serious challenges to the Missouri Department of Conservation and their cooperating entities such as Rural Fire Departments.

- We strongly recommend that the total amount of acres to be treated by RX fire be clearly identified. Table E-3 in Appendix E of the Draft Forest Plan identifies the potential of treating a total of 574,406 acres with RX fire applications. It is unclear whether these acres are all new acres or in fact some are re-treated acres. A well defined total acre figure may allay the fears of some of the publics that do not understand the value of RX fire nor understand the Forest's view of the need for a RX fire program of this size.
- Smoke management issues can and will influence other public land management agency's prescribed fire programs.

4. PART VI: ECOSYSTEM MANAGEMENT PRINCIPLES Page D - 20

MANAGEMENT PREMISES

- Under item 1 the text states “ In this context, the Mark Twain National Forest has adopted the period prior to European settlement as a reference from which to set desired future conditions and compare historical conditions to the present ones...” I suggest these concepts need to be fully explained and relate why this will be beneficial to today's society. The costs / benefits to society of the Forest moving towards the desired future condition of pre-European influence should be explained in detail. The cost / benefit perspective should address both the ecosystem and economics.

5.) FUNDAMENTALS OF ECOSYSTEM MANAGEMENT Page D – 22

- There is an underlying concept that everything relating to ecosystem health was much better prior to European man's arrival on the landscape. It should be simply stated why this is thought to be so. Also societal costs and benefits of restoring the systems should also be quantified. The challenge will be to meet the variety of complex societal needs ranging from recreation needs, forest product demands, water quality issue etc. while still restoring the system. Many Missourians still need what the land offers to sustain themselves, their business and their local communities. The value of ecosystem restoration will need to be quantified and explained so that it has public support. If the public does not support restoration efforts, it will ultimately fail.

OTHER COMMENTS

- The constant challenge for all public agencies is to sustain natural resources over the long term yet provide for local economies. There is great fear that ecosystem restoration will reduce the availability of growing stock in the red oak species group not only in the short term but in the long term too. A time line that shows how management will occur in the next ten to twenty years and how it relates to the availability of forest products particularly in the red oak species group may allay some of those fears. The discussion of availability should go beyond the ASQ determination.
- We agree with the statement made on page 2-22 of the Draft Revised Forest Plan as it relates to making decisions on trail development. We view one of the next

greatest and immediate challenge to face Public natural resource management agencies is how we manage the demands of non-traditional users such as ATV riders, mountain bikers, equestrian riders, rock climbers, spelunkers etc. How the Forest engages these publics will directly influence how the Missouri Department of Conservation meets the same types of requests from these publics. This approach by the Forest of documenting demands of any one particular group will provide valuable justification of how decisions are made to meet or not meet those demands. It will also provide other public agencies insight into the types of demands received by the Forest which will allow them to plan their own approach for meeting those demands.

- **ROTATION AGES**: As stated during the meeting on April 5, 2005, I personally felt the rotation ages stated on page 2-26 of the Draft Revised Forest Plan were too short. I felt the rotation age for management prescriptions other than 1.1 and 1.2 should be what is stated for management prescriptions 1.1 and 1.2 or 100 years for shortleaf pine, 120 years for white oak and post oak and 80 years for red, black and scarlet oak. Consequently rotation ages for management prescriptions 1.1 and 1.2 could be 150 years for shortleaf pine, 200 years for white oak and post oak and 80 years for red, black and scarlet oak. Following discussions during the meeting that explained the implications of longer rotation ages as it relates to ASQ computations, the limitations that longer rotation ages present to the flexibility of proposed harvest programs along with the opportunity that currently exists on the Forest to extend rotation ages should conditions warrant, points out the need to support listed rotation ages for the variety of management prescriptions.

SUMMARY

We would like to compliment the planning team for a well written document. We found the Draft Environmental Impact Statement enlightening. While I do not agree with all the assumptions stated in the text it does better define some of the premises for choosing the preferred alternative #3. We see the value of both Alternative #3 and #4. If the eventual accomplishments of the forest plan fall within the parameters of either alternative we believe the MTNF will be meeting its objectives. Our greatest challenge is and will continue to be how to meet society's needs yet ensure resource and system sustainability. This is an awesome task and one that cannot be taken lightly.

One final thought. The success of resource management is the long term commitment to applying specific management strategies to the landscape. Long term commitment must come in the form of consistent budgets, dedicated staff, monitoring of applied activities and the willingness and the ability to change management approaches as conditions and information warrants. The focus of the proposed Forest Plan is to restore ecosystems. The life of the proposed plan is 10 to 20 years. This is not nearly enough time to begin to restore the system. The challenge to the Forest will be how to maintain management approaches for decades or centuries.

Comment #2

- The plan often refers to restoration as a final condition, but in reality, it is a process. (ie. Page 1-1, Objective 1.1a – Within Management Prescription 1.1 areas, apply management activities to move natural communities towards **restoration**...). Restoration is a process, not a desired condition. Natural communities and systems are dynamic and will never be fully restored due to changing environment including natural and artificial influences.
- Throughout the plan and DEIS, there seems to be an underlying assumption that fire equals restoration and restoration is good, therefore all fire is good. I'm concerned that the amount of acres that will have to be treated with fire to meet objectives is not physically attainable based on normal weather conditions, topography and air quality standards. The only way to approach these high acreage objectives is to apply fire on a landscape scale. This ignores specific stand prescriptions with potential negative impacts on forest regeneration and production and may create safety and liability issues. (*Page 2-13, Emphasize large burns using year-round prescribed burning... Allow fire to burn into all natural community types on compartment-size (or larger) prescribed burns...*). How will wildfires be managed? If *let burn* and managed wildfires are used, how will prevention and suppression efforts of partners be influenced and how will the public be educated?
- What time period is used for the historic fire regime? It appears to be pre-European settlement. Why is this period considered the baseline for ecosystem health and diversity? What would these natural communities look like today without human intervention impacts on natural succession? Fire was only one disturbance element that influenced natural community development. Most fires in the Ozarks were influenced by indigenous peoples. Other influences such as large free ranging herbivores and other activities of indigenous peoples are no longer factors. In addition, widespread landscape and land cover changes have altered the impacts of flooding and hydrologic regimes, wind and weather events from pre-European settlement times. These factors all played some role in the development of natural forest communities in Missouri. In addition, new influences such as the introduction of exotic species, especially invasive exotics; major human caused landscape changes and other environmental and climactic differences cannot be duplicated. Fire alone cannot fully restore or maintain these communities.
- Timber management is addressed only as a restoration tool and/or to reduce hazardous fuels. *Goal 2.4 – Timber Management – Use timber management, where appropriate, to restore degraded ecosystems, enhances the condition of terrestrial communities, and reduce hazardous fuels to reach the desired condition of the forest.* Why not use timber management to sustain healthy and productive forests? Outside the Management prescription 1.1 areas, forests should be sustainably managed. For sustainable timber management to be realized there should be an objective for area control (based on rotation age & entry cycle) or

volume control (based on growth) of dedicated forested areas. This will dictate regeneration goals. Forest regeneration was not mentioned in the plan, but is crucial for sustainable forest management or restoration. I feel this should be better addressed in the plan and stated alternatives. (*Page 2-25, Harvesting does allow the use of silvicultural systems, harvest methods, and intermediate treatments to move the forest to the desired future condition...*), but does not address regeneration or provide for an objective of sustainable timber management. Through area or volume control of commercial forest areas. I question the basis or value of leaving 7-10 % of all even-aged regeneration harvests in reserve trees and/or reserve tree groups.

- Under Non-Native Species Management, I'd prefer that only native or naturalized species be allowed in landscaping projects in recreation and administrative facilities.
- Page 2-7, lists key habitat components to support native terrestrial wildlife species as: old growth (large, old trees, downed materials, snags); Shrub, grass, or forb habitat (regeneration openings); and grassland habitats. There is no mention of the vital role of managed forests in providing terrestrial wildlife habitat. For example, woody browse, mast, tops, etc.
- Stand structure and regeneration should have much more importance in the plan. They are both key to forest sustainability, wildlife habitat, and forest health. They also can be used to achieve many of the restoration goals and can have significant impacts on how and when fire is used. I'd like to see allowance for more site specific or ELT prescriptions rather than broader landscape or LTA prescriptions. Stand and age structure are mentioned under desired condition in Management Prescription 2.1 in Chapter 3, but standards and guidelines only address those necessary for wildlife management and not those for sustainable forest management.
- Alternative 1 is not acceptable do to the lack of active management to promote and sustain healthy ecosystems, negative impacts to local economies and transfer of harvesting to unregulated private lands. Wildlife habitat will also suffer under this alternative.
- Alternative 2 is not desirable due to the emphasis on ecosystem sustainability over timber sustainability. The MTNF is dominated by forest ecosystems that cannot provide for ecosystem sustainability if the forest is not sustainable. Acres burned per decade under this alternative (383,000) are too high to be reasonably achievable or sustainable.
- Alternative 3 provides for a good balance of ecosystem restoration and timber management. Forest health, production of forest products and other multiple use benefits are key elements along with the restoration and enhancement of terrestrial natural communities. A broad range of management activities are

allowed and a high diversity of wildlife habitat will be created/maintained. This alternative provides for support of local economies. My biggest concern with this alternative is the emphasis of harvesting of industrial roundwood through thinnings. The movement towards small diameter harvests can have significant impacts on local industry developed around the use of larger diameter commercial roundwood. I am also concerned about the high number of acres (250,000) that will be burned per decade under this alternative. It will be difficult to meet those targets except through landscape burns that favor broad natural community conditions over individual stand and ELT prescriptions. This alternative is acceptable based on the overall balance of management prescriptions and emphasis of timber management. I feel this will provide the widest variety of wildlife habitat and recreational use while maintaining forest health and providing for local economies.

- Alternative 4 is acceptable due to the emphasis of traditional forest management over ecosystem restoration. If properly applied, the disturbances created through forest management activities will serve to enhance ecosystem diversity and health. This alternative continues to provide the larger diameter commercial roundwood that local industry/economies are reliant on. Fire is limited to 73,000 acres burned per decade which may be more sustainable than those in the other alternatives. Limited acres thinned may impact overall success of timber management objectives. Recreational use may be more limited than in Alternative 3 due to the high percentage of the forest included under the same management objective. This alternative is acceptable.
- Alternative 5 reflects no change from the existing plan. I do not support this alternative due to the lack of natural community restoration. Management of glades and woodlands is limited. High management intensity on sensitive soils is a negative impact of this alternative.

Overall, there is a lot of good information in the Draft Forest Plan and EIS, but it was very difficult to understand or follow all the discussions. It seemed to repeat much of the same information in different sections and was difficult to make all the connections and fully understand the implications of the plan or any of the alternatives. I believe that Alternatives 3 and 4 are the best alternatives to address a broad spectrum of ecosystem issues, provide for sustainable forest habitat, maintain and enhance wildlife habitat, provide diverse recreational opportunities, support local economies and compliment management of adjoining state and private forest lands. I commend the planning team for completing such a huge project in a reasonable amount of time.

USE OF SILVICULTURE TO ACHIEVE AND MAINTAIN FOREST HEALTH ON PUBLIC LANDS

A Position of the Society of American Foresters

Adopted by the SAF Council on March 13, 2005. This position statement will expire March 13, 2010 unless, after subsequent review, the SAF Council decides otherwise.

Position

To achieve forest health and other forest management goals and to maintain public forests in an ecologically sustainable condition capable of providing the many values and benefits that people expect from their forests, the Society of American Foresters (SAF) advocates the use of the proven practices of silviculture.¹

The goals for national forests and other public lands are determined through comprehensive land management planning processes with extensive public participation. Forest managers are then responsible for selecting appropriate, site-specific silvicultural practices, which may include thinning or use of prescribed fire, or both, to accomplish desired forest health, watershed, and wildlife habitat objectives, including maintaining a diversity of tree species and age classes. Skillful use of silvicultural practices can achieve desired resource conditions more rapidly, and with greater assurance of success, than will reliance on natural processes alone. In many cases, silviculture is essential to meeting resource objectives in a timely manner—for example, to rehabilitate damaged watersheds following catastrophic wildfire.

National forest and public land managers in the United States now have a century of experience and research knowledge to support effective use of silvicultural practices on public forest lands. Public forest managers must have the ability to use proven silvicultural practices to reduce the risk of catastrophic wildfires, prevent damage to watersheds and wildlife and fish habitats, and address hazardous fuel conditions that pose unacceptable risks to life, property, and communities. Managers of public forests are both expected and encouraged to use their professional knowledge, experience, and judgment to improve the health, productivity, and condition of our forests for the benefit of the public today, and for future generations.

Issue

For almost a century, through federal and state forest fire protection efforts, wildfire has been purposely suppressed in many forests that are naturally adapted to periodic low-intensity wildfires. We now know that this policy has had some unintended and undesirable consequences, including altered tree species composition and increased

density of trees per acre (USDA-FS 2004). Increased stand density, or overstocking, increases fire hazard in most forest types (NRC 2000). Because of lack of vigor, dense forests are highly susceptible to insects and diseases and, consequently, increased tree mortality. Excess tree mortality causes increased fuel loading, resulting in hazardous forest fire conditions that can put watersheds, wildlife habitat, and other forest values at risk. These conditions also increase fire suppression costs and make wildfire control more difficult. The dominant factor affecting forest vigor is stand density (Helms 2003).

A number of proven silvicultural practices can be employed to manage stand density, reduce vulnerability to insects and diseases, and reduce tree mortality, thereby reducing the buildup of hazardous fuels and the risk of catastrophic wildfires. Such practices include precommercial thinning (the removal of small-diameter trees before they are large enough to provide an immediate financial return), commercial thinning, and use of prescribed fire under controlled conditions. Prudent thinning and prescribed burning can lower the risk of unacceptable loss of property and resource assets (Helms 2003). Appropriate thinnings and other operations also promote sustainable forestry by keeping wildfire and insect and disease outbreaks to noncatastrophic levels (Oliver 2003). Use of such silvicultural practices is often necessary to promote regeneration of desired tree species and achieve desired forest conditions, including maintaining a diversity of tree species and age classes across the landscape.

However, manipulation of forest vegetation is viewed by some people as environmentally harmful, and there are campaigns to inhibit use of silvicultural practices to accomplish forest health and other forest management goals on national forest and other public lands. Those opposed to the use of silviculture to improve forest health believe that the primary intent of such active intervention measures is to increase commercial timber harvest, irrespective of the constraints specified in federal land management plans and by the many laws and regulations that govern management of public lands. These plans, laws, and regulations provide the basis for maintaining sustainable forests for the benefit of future generations, and both research and professional experience have shown that many natural resource values desired by the public are promoted through the use of silviculture.

Background

Because of widespread forest health problems, many of our forests would benefit from thinning or other measures to control stand density, reduce vulnerability to insect-caused mortality, and accomplish regeneration of desired tree species. However, public forest managers often find themselves engaged in debate about the relative benefits and perceived detrimental effects of using active silvicultural intervention to affect the future condition of national forests and other public lands. Much of the debate arises from lack of agreement on appropriate forest land and resource management objectives. By law, federal forest managers are responsible for developing resource management goals and objectives using a process specified in the National Forest Management Act of 1976 (NFMA) and the Federal Land Policy and Management Act of 1976 (FLPMA). These

laws, together with their implementing regulations, provide specific opportunities for public participation in the development of land and resource management plans for each national forest, and for the public lands managed by the USDI Bureau of Land Management (BLM).

Once land and resources objectives are defined through the NFMA or FLPMA planning process, operational practices for attaining them are selected by federal land managers. Debate about forest management practices often focuses on commercial timber harvesting, especially clearcutting (SAF 2002a), but may also challenge the use of chemicals to control insects, diseases, and undesirable vegetation (SAF 2001a), as well as fire control and use of prescribed fire to improve forest stand conditions (SAF 2002b). Yet most resource management objectives can be achieved more rapidly, and with greater assurance of achieving the desired outcome, through use of silvicultural practices designed to manage stand density, improve tree species composition, reduce vulnerability to insect epidemics, reduce tree mortality, and prevent buildup of hazardous fuels. Alternatively, relying on a "do nothing" strategy, or allowing natural processes to take their course will take much more time, measured in decades, to change unsatisfactory current conditions, with no assurance that the desired future conditions will ultimately be achieved. In the interim, overstocked forests with large volumes of dead and downed trees and hazardous fuel accumulations will be vulnerable to catastrophic wildfire, placing watersheds, wildlife habitat, and communities at risk, and significantly increasing the costs of wildfire suppression. The issue for public policy becomes ensuring the ability of public forest managers to select appropriate, site-specific silvicultural practices to reduce the risks to natural resources and communities, accomplish forest management objectives, and achieve the desired future conditions in the most feasible time period, within operational and budget constraints.

Forest Health Problems. Certain circumstances can exert uncommon stress on forests and predispose them to extraordinary insect outbreaks and damage (USDA-FS 2003). In stands that are unmanaged by either silviculture or natural fire, trees often grow too close together and develop small crowns and root systems. These stands have low vigor and, as a result, are susceptible to drought, insects, diseases, and catastrophic wildfire. Under these stressful conditions, tree mortality can be extremely high (Helms 2003). Large areas of aging forests are also susceptible to insects and diseases. During the past decade, several of these forest health problems have arisen simultaneously, causing extensive tree mortality (USDA-FS 2003).

For nearly 100 years, as a result of federal and state fire protection efforts, we have greatly reduced the occurrence of wildfires in forests that are naturally adapted to relatively frequent, low-intensity ground fires. The long-term absence of fire has exacerbated forest health problems in many regions, including the Ozark and Ouachita Mountains (oak decline), interior western forests (dwarf mistletoe), western pine forests (mountain pine beetle), and western Douglas-fir and true fir forests (western spruce budworm). Many of these forests have altered tree species composition and increased

density of trees per acre. These changes have increased fuel loading and other conditions that are conducive to large-scale, high-intensity fires, as reflected in the increased acreage burned in many years since the 1980s (USDA-FS 2004). Increased tree mortality from these problems has contributed to considerable fuel accumulation, which in turn increases the risk of catastrophic wildfires, threatening watersheds and wildlife habitats, including habitats of threatened and endangered species, and resulting in degraded recreational opportunities (USDA-FS 2003).

This forest health situation is unprecedented and extensive. Of a total of 749 million acres of forest land in the United States, approximately 41 million acres, much of which is located on national forest and other federal lands, was identified in 2001 as having been damaged by insects and pathogens, suffering both defoliation and mortality. Over the next 15 years, about 70 million acres is at risk of uncharacteristically high mortality from insects and diseases. Four pests are responsible for two-thirds of the acres at risk: gypsy moth in the East, southern pine beetle in the South, root diseases in the interior West, and bark beetles in the West (USDA-FS 2003).

Management Objectives Vary by Ownership Category. Setting objectives is the key to effective forest management, whether forests are owned by federal, state, or local governments, Native American tribes, industrial corporations, investment institutions, or family forest owners. On private forests, owners determine their management objectives and the means to attain them within the constraints set by state laws or policies regarding silvicultural practices, such as timber harvesting, reforestation, slash disposal, and water quality protection, or through adherence to voluntary best management practices and sustainable forestry initiatives. On state and local government-owned forests, laws and public policies must be met, and management objectives often include generating revenue for public institutions, such as schools. On federal forests, especially the national forests administered by the USDA Forest Service, and the public lands administered by the USDI Bureau of Land Management, the goals defined in federal law include providing a sustained yield of multiple goods and services, determined by comprehensive planning processes that include public involvement, at the forest unit level. Specific objectives and management activities must be consistent with such land and resource management plans. The relevant laws are the Multiple-Use Sustained-Yield Act of 1960, the Wilderness Act of 1964, the National Forest Management Act of 1976, the Federal Land Policy and Management Act of 1976, and the National Environmental Policy Act of 1970.

Timber Harvesting on Federal Lands. SAF (2001b) supports commercial and noncommercial timber harvesting on federal lands allocated for such use through the land and resource management planning processes described above. SAF finds that current harvest levels on federal lands are insufficient to maintain forest health, meet the goals for hazardous fuel reduction to reduce wildfire risk, or provide economic and community benefits. Furthermore, SAF believes that current laws and regulations offer ample protection to sustain the full range of forest values on public lands, and that timber harvesting is a legitimate use of the national forests and BLM public lands, as the

multiple-use mandates described in federal law make clear (SAF 2001b).

The Need for Active Forest Management Through Silviculture. The large-scale stand-replacement fires faced by forest managers today are uncharacteristic compared with historical wildfires; this is a result of changes in forest conditions following past timber-harvesting practices, 100 years of firesuppression, and inadequate thinning of regenerated stands (Fitzgerald 2002). We now know that the current overcrowded stands in many of our forests do not sustain the diversity of wildlife and plants that existed a century ago (Covington 2003; SAF 2003). Some people mistakenly assume that the forests they are accustomed to seeing today can be preserved unchanged without undertaking active silvicultural management practices; they advocate no management intervention as preferable to any type of stand improvement cutting, fuel treatment, or prescribed burning (Arno and Allison-Bunnell 2002; Covington 2003). However, such a "no-action" strategy departs radically from natural processes that occur in fire-adapted forests. Today's uncharacteristically large wildfires can cause severe damage to forests and watersheds by accelerating runoff and erosion, exposing burned landscapes to invasion by exotic weeds, and cause degradation of native plant communities and wildlife habitats. In addition, severe wildfires can harm streams and aquatic food chains and damage habitats for terrestrial and aquatic species threatened with extinction (Arno and Allison-Bunnell 2002; Covington 2003; Fitzgerald 2002).

Recent experience has shown that the damaging and costly consequences of catastrophic wildfire are even more evident in the wildland-urban interface, where residential development is encroaching on forested landscapes, and where forest fire protection efforts, in addition to protecting natural resources, must be directed at preventing loss of human life and property. For example, the devastating 137 thousand acre Hayman fire in Colorado in 2002 resulted in direct suppression costs exceeding \$43 million, loss of 600 structures with an insured value in excess of \$38 million, and the loss of five human lives. Subsequent costs for watershed rehabilitation for this fire are expected to exceed \$39 million, and the long-term damage to the affected watersheds will have serious consequences for many years into the future (Lynch 2004).

A broad-scale resource assessment completed in the interior Columbia River basin provides evidence that the condition of federal forest lands in this region has deteriorated and could be improved (Quigley et al. 1996). A team of Forest Service scientists concluded that compared with the current "process predicament," which often prevents the Forest Service from taking actions that would improve forest health conditions (USDA-FS 2002), "active management appears to have the greatest chance of producing the mix of goods and services that people want from forest ecosystems, as well as maintaining or enhancing long-term ecological integrity" (Quigley et al. 1996).

In support of silvicultural intervention to accomplish forest health goals on public lands, SAF cites the findings of many scientists and forest managers who have extensively

studied forest health issues:

- "The alternative to active management is reduced productivity, many dead trees, and fuel conditions favorable to severe and potentially destructive wildfires. ... [however,] public policies tend to inhibit active management of national forests" (O'Laughlin and Cook 2003).
- "If we continue the current passive management approach, forest health conditions can be expected to deteriorate, and forests will continue to be subject to high-severity wildfires, with concomitant damage to watersheds, fish and wildlife habitat, homes and communities. Therefore active management within a forest sustainability context is needed" (Fitzgerald 2002).
- "Rather than fighting fire as an implacable enemy, we should actively manage it in order to enjoy a healthy and sustainable wildland forest" (Arno and Allison-Bunnell 2002).
- "Simply installing fuel breaks around our cities and rural developments and forsaking the wildlands would be an abdication of our responsibility to future generations. Attention cannot be narrowly focused on a ring around the developed areas. ... Restoration-based forest health treatments are proving to be so beneficial in contrast to no action that we must move forward rapidly and at large scales" (Covington 2003).
- "The absence of active forest management caused by overbearing regulatory expenses, coupled with continued absence of fire on the landscape, will and has led to overstocked, unhealthy stands in many forest types in California" (Dicus and Delfino 2003).
- "Today, because society has virtually halted fire from playing its ecological role in the renewal of our eastern forests, forest management practices are the primary means of sustaining important young forest habitats and associated wildlife" (Dessecker 2002). "In Appalachian oak forests, active management of younger stands can create old-growth attributes in a significantly shorter period than natural processes would allow" (Jenkins et al. 2004).
- "Active timber management can sometimes promote forest health and reduce damage by enhancing the overall vigor of trees in a forest or by changing the forest composition... Management that precludes natural processes or avoids timber management and favors preservation of forests for other purposes can alter species composition and create more dense or less vigorous forests that are conducive to some damaging agents" (USDA-FS 2004).

¹The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis. (Helms 1998).

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About the Society

The Society of American Foresters, with over 15,000 members, is the national organization that represents all segments of the forestry profession in the United States. It includes public and private practitioners, researchers, administrators, educators, and forestry students. The Society was established in 1900 by Gifford Pinchot and six other pioneer foresters.

The mission of the Society of American Foresters is to advance the science, education, technology, and practice of forestry; to enhance the competency of its members; to establish professional excellence; and to use the knowledge, skills, and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

The Society is the accreditation authority for professional forestry education in the United States. The Society publishes the Journal of Forestry; the quarterlies, Forest Science, Southern Journal of Applied Forestry, Northern Journal of Applied Forestry, and Western Journal of Applied Forestry; The Forestry Source, and the annual Proceedings of the Society of American Foresters national convention.