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Forestry Professionals

A key stakeholder group in forest issues, policies and management planning

The Issue

Public agencies and other decision-making groups often seek input and advice from stakeholders as they evaluate forest resource issues and develop related policies and management plans. Forestry professionals sometimes are among these participants due to their affiliation with more commonly identified stakeholder groups (e.g., forest industry, forest landowners). However, these individuals are rarely called upon to represent the professional forestry perspective independent of their employer or client interests. This independence is important because when they represent these interests, forestry professionals in both the public and private sector may be unable or unwilling to offer their full and candid views about important forest issues.

The result is missed opportunities to tap highly relevant expertise and experience, as well as a limited voice for a key group that must deal directly with policies and plans shaped by stakeholders who lack the unique, independent insights of the professional forestry community.

The Professional Response

Recognizing these missed opportunities and voices, the Oregon Chapter of the Society of American Foresters (OSAF) stands able and willing to represent the professional forestry perspective when stakeholder input is sought in Oregon. OSAF has about 1,000 members and includes field foresters, researchers, administrators and educators who work for federal, state or local governments; for universities; for small and large landowners; and for small businesses and large corporations.

Although we come from "all walks of forestry," we pledge that our professional views and other input will be consistent with the SAF mission to:

- advance the science, education, technology, and practice of forestry;
- enhance the competency of its members; establish professional excellence;
- 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.

Please contact OSAF when stakeholder input is sought, at:
www.forestry.org or 503-224-8046

Forestry:
An *Objectives-oriented* Profession

The Society of American Foresters (SAF) represents much of the forestry profession at the national, state, and local levels. People outside the profession may wonder who belongs to the SAF and what specific perspective(s) they offer, particularly regarding important forest resource issues. The following notes provide some insights about SAF and its members. Of course, core principles like SAF's Mission Statement and its Code of Ethics (see back of this sheet) play a key role in defining the organization and its members, and are reflected here to some degree.

Most professional members of SAF have earned university degrees from SAF accredited forestry programs. In such programs, forestry professionals are trained to be objectives-oriented. This is similar to other professions (e.g., engineering) that use appropriate expertise and experience to address societal needs and related employer-defined, problem-solving tasks.

Thus, forestry professionals view and manage forests for a full range of uses and values – it's the objectives of the owners and related policies for the forest land that drive what SAF members are oriented toward. This is reflected in the technical "Working Groups" within SAF that members can choose to affiliate with, including such diverse interests as Recreation, Wilderness Management, and Wildlife and Fish Ecology.

Another important and related characteristic of SAF and its members is their focus on active management of forest lands. This focus stems from:

1) Substantial knowledge (research and education) and experience with what works and what doesn't (all are vital given the site-specific, extended lives of forests)
2) A service-to-society Mission, which compels actions that are most effective and efficient for providing for society's desires and needs/demands

It's useful to note that some groups involved with forest resource issues have a different focus and world view than SAF. For example, some follow a philosophy in which natural environments (including forests) with little or no human influence are considered superior. Such distinctions are important to recognize and highlight, particularly with forest issues that are often debated as science/technical matters when instead they are largely values or philosophy based.

The employment affiliation of SAF members can provide some indication of the perspective(s) they offer. But recent data for the approximately 1000 members in Oregon (March 2007) suggest that no particular employment-based perspective is dominant: 27% public employment, 24% private industry/business, 26% retired, 11% consultants, and 12% students or other employment.

Thus, SAF members come from "all walks of forestry" and for a professional society such diversity clearly is an asset, particularly when SAF leaders and members offer their individual and collective views on important forestry issues. And with their unique training, experience, and interaction with many other specialists, SAF members play a central role in helping ensure the fundamental benefits of environmental, economic and social sustainability from our forest lands and resources.

Notes by Paul W. Adams, Chair of the Oregon SAF Policy and Legislation Committee, and a Professor and Extension Specialist in the Forest Engineering Department at Oregon State University. Paul has been an SAF member for over 30 years. August 2007.

Who We Are

Since 1900, the Society of American Foresters has provided access to information and networking opportunities to prepare members for the challenges and the changes that face natural resource professionals.

SAF Core Values are:

1. Forests are a fundamental source of global health and human welfare,
2. Forests must be sustained through simultaneously meeting environmental, economic, and community aspirations and needs,
3. Foresters are dedicated to sound forest management and conservation, and
4. Foresters serve landowners and society by providing sound knowledge and professional management skills

Mission Statement

The Society of American Foresters (SAF) is the national scientific and educational organization representing the forestry profession in the United States. Founded in 1900 by Gifford Pinchot, it is the largest professional society for foresters in the world. **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.** SAF is a nonprofit organization meeting the requirements of 501 (c) (3). SAF members include natural resource professionals in public and private settings, researchers, CEOs, administrators, educators, and students.

SAF Code of Ethics

On joining the Society of American Foresters, members assume a special responsibility to the profession and to society by promising to uphold and abide by the following:

Principles and Pledges

1. Foresters have a responsibility to manage land for both current and future generations. We pledge to practice and advocate management that will maintain the long-term capacity of the land to provide the variety of materials, uses, and values desired by landowners and society.
2. Society must respect forest landowners' rights and correspondingly, landowners have a land stewardship responsibility to society. We pledge to practice and advocate forest management in accordance with landowner objectives and professional standards, and to advise landowners of the consequences of deviating from such standards.
3. Sound science is the foundation of the forestry profession. We pledge to strive for continuous improvement of our methods and our personal knowledge and skills; to perform only those services for which we are qualified; and in the biological, physical, and social sciences to use the most appropriate data, methods, and technology.
4. Public policy related to forests must be based on both scientific principles and societal values. We pledge to use our knowledge and skills to help formulate sound forest policies and laws; to challenge and correct untrue statements about forestry; and to foster dialogue among foresters, other professionals, landowners, and the public regarding forest policies.
5. Honest and open communication, coupled with respect for information given in confidence, is essential to good service. We pledge to always present, to the best of our ability, accurate and complete information; to indicate on whose behalf any public statements are made; to fully disclose and resolve any existing or potential conflicts of interest; and to keep proprietary information confidential unless the appropriate person authorizes its disclosure.
6. Professional and civic behavior must be based on honesty, fairness, good will, and respect for the law. We pledge to conduct ourselves in a civil and dignified manner; to respect the needs, contributions, and viewpoints of others; and to give due credit to others for their methods, ideas, or assistance.

Adapted from: http://www.safnet.org/who/whoweare.cfm

Active Management to Achieve and Maintain Healthy Forests

A Position of the Oregon Society of American Foresters

The Oregon Society of American Foresters supports active forest management prescribed by professional foresters to achieve and maintain healthy forests, consistent with land management objectives. To accomplish this, a wide range of proven forest management strategies and tools should be available to professional foresters. These include carefully planned uses of forest thinning (sometimes removing trees over a wide range of sizes and ages), approved chemicals (e.g., fertilizers and pesticides), prescribed burning, salvage of designated dead and dying trees, regeneration harvest (e.g., clearcutting, shelterwood, selection) and mixed species planting. Efficient implementation of active forest management requires good access with forest roads and a minimum of inflexible, blanket restrictions. Many federal forests in Oregon now have an especially acute and long-term need for active management with diverse strategies and tools, including the access and administrative flexibility necessary to effectively expand and maintain such management.

Issue An important, ongoing challenge for professional foresters is to achieve and maintain healthy forests. This challenge includes debate about the definition of forest health, which is often based on personal or group values and management objectives. Among professional foresters one widely accepted definition of "good" forest health is that it is a condition where biotic and abiotic influences on the forest (e.g., pests, weather, silvicultural treatments, and harvesting practices) do not threaten current or future resource management objectives or options. Natural events like wildfires, wind, diseases, and insects are important factors in a healthy forest ecosystem. The original native forests in Oregon were shaped significantly by these events.

However, a century of fire exclusion and more recent reductions in active management, especially on federal lands, have resulted in large areas of forests with overstocked, very dense structures and unusual species mixtures near or beyond the extreme range of natural conditions. The consequences of these changes have been increased pest infestations and large wildfires that are far more severe and damaging than what was common historically. The economic and environmental impacts and the human health and safety risks from these extreme disturbances are significant, and our growing population and diverse forest uses make such impacts and risks widely unacceptable.

Many tools can help professional foresters achieve and maintain healthy forests, but use of these tools may be significantly restricted by existing resource policies or inaccurate perceptions and concerns of the interested public. These tools include well-proven and scientifically based practices such as prescribed fire, use of pesticides, thinning, salvage harvesting and regeneration harvest (Oregon SAF 2003). Even with improved policies and implementation, the wide success of newer management programs for forest health will not be evident for many years, as both the problems and solutions can be decades in the making.

Background Years of disease, insect infestations, and past management policies and practices have resulted in large areas of forests that are at high risk from severe wildfires and further insect and disease epidemics. These problems are especially severe on federal lands in central, eastern and southern Oregon, where many forests are overstocked and the western spruce budworm and Douglas-fir tussock moth have defoliated many Douglas-fir, spruce, and true fir. Although defoliation alone may not kill trees, these and other pests (e.g., fir engravers, Douglas-fir bark beetles) have put millions of acres of forest under stress and at high risk of catastrophic fires. In western Oregon, overstocking has resulted in significant mortality by bark beetles. Conversion of natural spruce-hemlock forests to Douglas-fir near the Oregon Coast may have contributed to an unprecedented outbreak of Swiss needle cast, resulting in overall growth loss of 25%. With large increases in national and global travel and trade that provide efficient vectors, invasive and exotic pest species are growing concerns as forest health problems.

Recent wildfires in the West have been unusually intense and damaging to important resource values like wildlife and fish, some of which are listed as threatened or endangered species. In the last decade, the nation

experienced three of the worst fire seasons on record including the largest fire in Oregon since the Civil War, the Biscuit Fire. With the persistence of very limited active forest management in many areas, fuel loads have built up and can be expected to continue and grow further, greatly increasing the risk of catastrophic wildfire.

In the past, foresters often prescribed heavy thinning, clearcutting or salvage of unhealthy or dead trees to control the spread of pests, harvest wood fiber for useful products, and regenerate new forests. More recently, conflicting policies and controversies over management tools, commercial harvest, and cutting of larger trees on public lands have greatly restricted the ability of agencies to manage unhealthy forests. In addition to increasing the risk of further damage to affected forests, such restrictions have increased the risk of catastrophic losses in adjacent healthy forests, both public and private. Altered funding formulas and reduced budgets and professional staffing also have limited the ability of agencies to plan and implement both pre-commercial and commercial thinning and other treatments to address forest health concerns, despite the growing need for such work. Newer policies and funding limitations have created additional barriers to active management by reducing access through road closures or inflexible blanket restrictions.

Oregon's forests are resilient and dynamic, and disturbances play an important role in maintaining their health and unique attributes. However, passive management that relies primarily on natural disturbance entails serious risks to the wide range of continuous benefits that Oregonians demand from their forests, from wildlife habitat to wood products to recreation opportunities. These benefits can be best achieved and sustained through active management for healthy forests. Although active management can have some short-term impacts and cannot eliminate all forest health or wildfire hazards, a substantial and growing body of research and professional experience shows that it can produce much more reliable and positive results than a passive management approach.

Professional foresters, in collaboration with other natural resource specialists, need the flexibility to prescribe and use a broad range of proven, science-based methods for preventing and treating forest health problems. When tailored to each unique, local situation, such flexibility allows highly effective, economical and environmentally sound practices to be implemented. These positive outcomes can help ensure that Oregon's healthy forests will be maintained and those that are currently unhealthy will be substantially improved.

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This position statement was adopted by the OSAF Executive Committee on September 19, 2003 and supported with 98% approval by member referendum in December 2003. The statement will expire on September 19, 2008 unless after thorough review it is renewed by the Committee.

Commercial Timber Harvest on Public Lands in Oregon

A position of the Oregon Society of American Foresters

The Oregon Society of American Foresters supports commercial timber harvest as an appropriate objective and primary tool for healthy, sustainable forests on public lands in Oregon. Most of these lands are affected by laws that allow or mandate sustainable commercial harvest with resource management planning. Where fish and wildlife habitat, water quality, or recreation is a priority, commercial harvest can be compatible and even promote these values when carefully planned and supervised by professional foresters and other resource specialists. Commercial timber harvest provides important economic and social benefits that help sustain local communities, especially in rural areas. These benefits often extend more broadly than government payments in lieu of shared harvest revenues. Management and use of renewable, recyclable, biodegradable, and energy conserving forest products from public lands are imperative given increasing human needs and environmental sustainability concerns. The expanding scope and cost of addressing Oregon's forest health, wildfire and safety hazards add further urgency to the need for active management and restoration of public lands, including commercial harvest.

Issue Some groups and individuals have called for greater restrictions or a total ban on commercial timber harvest on public lands in Oregon, such as federal, state or municipal forests. Supporting arguments focus on environmental risks and the view that commercial activity on public forests is inappropriate, costly, and simply benefits large corporations. Some opinion polls and policy decisions to limit harvest on public lands are cited as evidence of support for such restrictions. However, most arguments to prohibit commercial harvest on public lands are based on inaccurate and outdated generalizations about environmental impacts and an unwarranted vilification of economic enterprises. Moreover, increasing forest health, wildfire and safety problems in many public forests where harvesting has been greatly reduced suggest that further restrictions in Oregon could simply exacerbate forest resource and socioeconomic concerns in affected areas. Demands for most forest products also continue to increase, and the negative environmental impacts from the use of alternative materials or timber sources outside Oregon can be significant and far-reaching.

Background

Oregon's public forest lands are very extensive and productive

Oregon has 16.6 million acres of public forest lands, an area about equal to all of western Oregon north of Grants Pass. Most (13.2 million acres) of these public forests are productive and thus they represent about 60 percent of the land in Oregon that can grow commercial timber; included are some of the most productive forests in the world. About 12.3 million acres of these productive forest lands are in federal ownership, and 0.9 million acres are state, county and municipal lands. Nearly one-third (3.8 million acres) of these productive lands are withdrawn specifically from commercial use as wilderness areas, parks and other major reserves. Given the scope and productivity of Oregon's public forests and their diverse uses and values, policies that significantly restrict commercial harvest have both local and global effects.

Sustainable commercial harvest is allowed or required

The 9.4 million acres of unreserved, productive public forest lands in Oregon are established and managed under laws that allow or mandate sustainable commercial harvests. For example, federal forest managers are directed to "furnish a continuous supply of timber for the...citizens of the U.S." (Organic Act of 1897) and provide "a permanent source of raw materials for the support of dependent communities and local industries of the region" (O&C Act of 1937). Such laws also direct a significant portion of the income from such timber harvests to local governments, recognizing that extensive areas of public lands can significantly reduce property tax revenues. Oregon law, for example, requires most state forest lands be managed with about two-thirds of the timber revenues shared with the local counties, schools and taxing districts where the forests are located. In addition, laws requiring prompt reforestation and maintenance of forest land productivity directly promote the sustainability of forest benefits.

Evolving policies and practices protect other values

Timber harvest planning and practices have improved greatly in recent years and continue to respond to both evolving knowledge and public concerns and laws for protecting diverse resource values. Forest road practices also have seen wide improvements, and advanced harvest systems reduce the need for new roads. On federal lands, the Northwest Forest Plan focuses on conservation of important fish and wildlife habitat. On State Forests (e.g., the Tillamook), in addition to the strict requirements of Oregon's Forest Practices Act, updated management plans include steps to improve mature forest habitat for key species. Such directives restrict harvest in sensitive areas and add to the costs of operations on public lands in Oregon. However, economical harvest usually is possible where planned well and not subjected to extensive delays from intentionally obstructive legal appeals or unlawful protests.

Commercial harvest is a key management tool

Oregon's forests are constantly changing. Trees and other vegetation grow and add biomass, shed branches and foliage, and die from crowding or insect or disease infestations. This dynamic nature of our forests makes timber harvest an important management tool for forest products, restoration and other values. On both federal and state lands, teams of professional foresters, biologists, other resource specialists, and engineers carefully plan and supervise harvests to protect or enhance diverse resource values. Important work such as improvements to fish habitat and roads are enhanced by the income, equipment and skilled personnel made available by local commercial harvest operations. Resource professionals recognize that harvest plans must vary widely among diverse management areas and objectives. No single, simple strategy fits all.

Economic benefits are large and broad

Commercial timber harvests provide significant economic benefits, including helping to pay for management for diverse values. As the nation's leading lumber producer, Oregon's wood products industry brings substantial income to the state and employs about 52,000 workers, a level comparable to the high-tech manufacturing sector. Wood products employment is especially important in rural communities where other high-wage jobs are few, and it also remains significant even in Oregon's urban areas. Basic industries like forest products also generate significant wealth both directly and far beyond the industry itself through a strong "economic multiplier." Government payments to counties in lieu of timber harvest often do not achieve comparably broad and enduring benefits. Given their location, productivity and size, public forest lands have a key role in commercial timber production and employment throughout the state, even where other values are emphasized. Commercial timber harvest is widely recognized as an essential component of sustainable forestry and local communities near forests. Harvests from state forest lands, for example, generated $58 million for Oregon counties and nearly $10 million for Oregon schools in 2006.

Forest products are a vital renewable and sustainable resource

Overall, the U.S. is now a net importer of both energy and wood. And because domestic demand for most forest products continues to rise, major harvest restrictions on public land in Oregon result in an increase in harvesting in other ownerships, regions and countries, including many that have far less stringent environmental standards or are much less productive (i.e., more acres must be harvested for similar yields). The rising cost of forest products, partly due to local restrictions that add to production costs and reduce market supplies, also increases the use of alternatives such as steel, plastic and concrete. These materials pale in comparison to forest products in terms of fundamental sustainability, i.e., none is produced from an active air pollution cleanser (trees) with very little energy while also being exceptionally renewable, recyclable, and biodegradable. Forest biomass also can provide an alternative energy source to fossil fuels. The substantial environmental impacts that arise indirectly from broad harvest restrictions are rarely considered in opinion polls and politically motivated policy decisions.

Active management is widely needed

Where major concerns for other values are identified by site-specific assessments and collaborative planning, timber harvest can be locally restricted on public lands. In contrast, broad prohibitions provide no flexibility and do nothing to address such serious concerns as Oregon's rapidly expanding forest health and wildfire hazards. Ironically, such prohibitions would trade manageable risks for the largely uncontrollable and violent forces of nature, with potentially far greater environmental damage to the values that are the focus of "protection." Former Governor Kitzhaber, his fellow western governors, and the General Accounting Office (a major federal agency that conducts nonpartisan analyses) are among the notable leaders that have studied and stressed the need for very extensive active management to reduce these widespread forest health and wildfire problems. Reducing public safety hazards from roadside danger trees also is a growing need in areas impacted by wildfire and other disturbances. The large scope of active management and restoration needed makes commercial timber harvest a vital tool and revenue source for management. It also can provide high levels of environmentally friendly products and economic benefits to Oregon communities, as well as the healthy, safe and fire-resistant forests that attract both visitors and businesses.

Adopted by the Executive Committee of the Oregon Society of American Foresters (OSAF), February 1, 2007. This statement will expire on February 1, 2012, unless after thorough review it is renewed by the Committee.

Managing Mature and Old-Growth Forests

A Position of the Oregon Society of American Foresters

The Oregon Society of American Foresters recognizes the unique characteristics and values that mature and old-growth forests provide. Although there are many definitions for old-growth and none are exact, we describe old-growth as forests having: large snags and downed logs; some patchiness (openings, sometimes brushy and caused partly by loss of large, dead and dying trees); one or more canopy layers; and trees of various size and ages, with some relatively large, old trees. Not all forestlands had or will ever achieve this kind of condition. Exact amounts, tree sizes, and ages for development of each of these forest attributes vary depending on forest type, and some are naturally more uniform or younger (e.g., lodgepole pine and aspen forests) due to frequent natural disturbances such as fire and wind. Mature forests, the stage of stand development preceding old-growth forests, contain some attributes of old-growth forests (e.g., some large diameter trees) but lack other key old-growth characteristics. However, not all mature forests will become old-growth because of natural disturbance (e.g., fire).

A common perception is that actively managing old-growth is inappropriate or incompatible with other values, resulting in proposals to set aside mature and old-growth forests and prohibiting any form of management. ***However, even where non-timber values are primary, active management of mature and old-growth forests may be necessary to promote and/or sustain ecological values over time.*** This is especially true of forests in dry fire-prone landscapes. Old-growth management may include everything from preservation to some level of prescribed burning, thinning trees of various sizes (to reduce competition and preserve big trees from the effects of drought and climate change, insects or disease), salvaging, and planting. Such treatments would not be needed every year; in fact, there may be many decades of inactivity between periods when management actions are most effective.

Therefore, a "one-size-fits-all" management approach to every mature or old-growth forest will not address the range of unique and dynamic forest conditions that occur. ***Rather, site-specific plans will be much more effective in achieving and maintaining old-growth characteristics. These plans should carefully consider local ecological conditions and objectives, social concerns, and policy constraints of the owners or managers.***

Issues

Concerns about mature and old-growth forests raise many management issues and challenges, which highlight important differences in perceptions, values and philosophies. A common issue is the invocation of a single, simple solution for a diverse and complex situation. This complexity is shown by the range of questions that must be addressed to effectively manage mature and old-growth forests on a site-specific basis, including: 1) the definition of an old-growth forest; 2) the potential uses and values of mature and old-growth forests; and 3) the detailed objectives and policy constraints for management. Similarly, disagreements have stemmed from widely varying public perceptions and preferences, including: 1) the idea that nearly all pre-European settlement forests in Oregon were old-growth; 2) the perception that mature and old-growth forests are permanent and unchanging over both time and space; and 3) contrasting views about the preferred approach or philosophy for managing mature and old-growth forests, e.g., from preservation to active management.

Current examples of old-growth management issues include policy directives or advocacy for specific tree diameter (e.g., 21 inches) and age limits (e.g., 80 years), at or above which no trees can be harvested. This approach greatly simplifies the definition of old-growth to a set of relatively arbitrary diameter or age criteria,

and does not address the complexity and dynamics of old-growth forests, their development, or compatible management objectives.

Background

The definition of an old-growth forest is not exact (Helms 2004). A few large individual trees of old age do not constitute an old-growth forest. Old-growth forests often have a patchy appearance, trees of various sizes and some of very large size, and large snags and downed wood. However, no one single attribute, be it appearance, tree age, tree size, canopy structure (foliage layers), or species composition, can consistently define old-growth. The area or size of an old-growth forest is also important in this discussion. Old-growth stands of small acreage may not be effective habitat for old-growth dependent wildlife species, but may serve as "aesthetic" old-growth for the public and for educational purposes and provide important microsites that increase the ecological diversity of a forest.

The term "late-successional[1]" is sometimes used as an ecologically based descriptor of old-growth forests. Ecological definitions have value in that they are based on forest processes (e.g., succession and disturbance) and resulting forest structure. However, old-growth is often perceived by many as a qualitative forest condition; a condition that can invoke awe, wonder, inspiration or even veneration. Evidence of the range of popular definitions is shown in the simple descriptors placed on old-growth forests, such as cathedral, heritage, or ancient. These labels also carry preconceived or value-based notions of the attributes of an old-growth forest, although some old-growth forests may not be consistently viewed as "cathedrals" and some may not be "ancient" yet contain old-growth attributes. Lodgepole pine and aspen trees, for example, are not long-lived species and thus these forests may contain "old-growth" attributes that are unique to them and far different from old-growth species with longer life spans (Spies 2004). A forest type and site-specific understanding of a particular forest and its associated values is more useful than an inexact label.

Historically, old-growth forests had great commercial value when harvested for timber products, and they supported the development of many Oregon communities. Although still valuable and prized for certain uses, large trees from old-growth forests currently are used less for timber because changes in log supply have forced most mills to retool to manufacture forest products from younger and smaller trees. Old-growth forests now are recognized for much broader values, including wildlife habitat, recreation, genetic reservoirs, watershed functions, carbon storage, scientific research, sites that preserve our North American heritage, and simply their awe-inspiring character.

Forests with older trees can be found in different ownerships, each managed under unique objectives and legal requirements including, in the case of federal lands in Oregon, specific mandates for old-growth management. Not all of these older forests contain all of the features of a fully developed old-growth forest, but many of them contain old-growth elements such as large live and dead trees. Private landowners have greater leeway in setting their own management objectives and related actions. Although little fully developed old-growth remains in private ownership, forest landowners in Oregon must leave some level of snags and downed logs in harvest areas. In general, as long as applicable regulations concerning fish and wildlife habitat protection are met, private landowners in Oregon may harvest trees in these older forests, some of which may meet an ecological definition of old growth.

Old-growth forests have important and diverse values that may not conflict as much as often believed. It is notable that large areas of state lands in Oregon with mandated timber production goals now are being actively managed with longer harvest rotations to create valuable old-growth-like habitat features for fish and wildlife, while also generating economic benefits for local communities. This approach has not satisfied all interests and significant pressure to produce forests with mature and old-growth features persists. For example, recent attempts have been made to further restrict management practices on private and state lands through

[1] Succession is the natural, gradual supplanting of one plant community type over another, with a "late-successional" community often considered as part of a final, long-term stage before a catastrophic event (e.g., wildfire) repeats the process, initiating "secondary" succession.

regulatory changes and ballot initiatives to maintain or promote mature or old-growth forests for non-timber values. However, it is the mix of forests ownerships managed for a range of forest conditions (young to old) that together produce a forest landscape with very high overall ecological and socioeconomic value.

As a collection of living, dying and dead organisms with many natural influences, old-growth forests are constantly changing and some have a finite "lifespan." This would be true even in the absence of human influences. The common perception is that before pre-European settlement, nearly all forests in Oregon were old-growth. Although direct evidence is limited, studies have concluded that the amount of old-growth before European settlement varied over the centuries from about 30 to 70 percent across forested landscapes in northwest Oregon (Teensma et al. 1991, Wimberly et al. 2000, Wells and Anzinger 2001, USDA Forest Service 2003). Today, approximately 6.5 million acres of mature and old-growth forests exist in western Oregon and Washington (USDA Forest Service 2003). All forests, including old-growth forests, will eventually succumb to natural, destructive disturbances (e.g., wildfires, windstorms, insect infestations) and then regenerate over time. Although we may be able to protect old-growth forests from some disturbances, it is not possible to protect them from all disturbances, and values for which old-growth is desired may not be adequately maintained without planning for growing old-growth forests of the future.

The management strategy used for old-growth values depends on the mix of ecological goals and the environment in which the forest occurs. Where biodiversity is the primary goal, conservation of old-growth is based on a range of management strategies ranging from passive to active management. In many cases mature and old-growth forests and associated values can benefit from active management as a substitute for natural disturbances (e.g., wildfire) and processes that have been reduced or altered by human needs or activities. In some situations it can be effective to mimic natural processes like fire and insect outbreaks with silvicultural techniques (e.g., thinning and prescribed fire). This is particularly true in fire prone forest types or in uniform plantations once intended primarily for timber production. These actions may reduce or avoid the undesirable impacts of catastrophic natural events to both the site being managed and the surrounding area. There can even be instances where substantial tree harvesting may serve as an effective surrogate for natural disturbances that promote desirable old-growth characteristics, particularly if some dead wood and large trees are left on site. With a blend of ecological, social and economic objectives, landowners can use active management strategies to produce some key old-growth features in stands managed also for timber production, including long rotations and the retention of large live and dead trees.

Importantly, reduction of old-growth stand density by thinning understory trees has been shown to improve tree health and vigor (Stone et al. 1999, Latham and Tappeiner 2002, McDowell et al. 2003), in turn improving their resistance to bark beetles while also reducing the risk of stand-replacing wildfire; this is particularly important in dry forest ecosystems. Such actions can be especially valuable for extending the life of existing old-growth trees and forests while other younger forests develop into an old-growth condition. Thinning in mature forests may hasten the development of old-growth structural characteristics (Bailey and Tappeiner 1997; Acker et al. 1998). Similarly, Newton and Cole (1987) reported substantial successes in achieving large trees and old-growth character in westside Douglas-fir after extended periods after heavy thinning, and that long rotations with such management could combine old-growth features on large parts of the landscape while producing some high quality timber. Where stand-replacement fire has destroyed existing old-growth forests, active restoration can effectively re-establish conifers to help ensure the potential and timely progression towards future old-growth conditions. Without reforestation and vegetation management, re-establishment of conifer forests in some areas may take centuries, particularly on sites that burned uncharacteristically hot and face severe competition from plants that limit conifer establishment.

Conclusions

Oregon's forest owners and managers have different goals that lead to a range of management approaches that promote diverse old and young forests with high ecological and social values. The overall pattern and distribution of forests is an important consideration in sustaining a broad range of values from our forests, and in providing for old-growth features and functions as forests change over time.

Misunderstandings and disagreements about the management of old-growth can be reduced by addressing key questions and considerations raised in this discussion, including careful attention to local conditions and concerns. Like the management of other forests, success of old-growth forest management will be greatly enhanced by current knowledge and experience-tempered, site-specific plans prepared by professional foresters and other specialists; that is, plans that carefully account for site-specific conditions, detailed management objectives, and applicable legal mandates and social concerns.

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Riparian Forest Management and Fish

A Position of the Oregon Society of American Foresters

The Oregon Society of American Foresters believes that most state and federal regulations that restrict forest practices in riparian areas in Oregon will benefit fish habitat over time. However, in some locations, forest thinnings and other active management of riparian areas could reduce natural risks (e.g., severe wildfires) or accelerate desired improvements in streamside conditions and fish habitat. Additionally, fish populations can be greatly affected by many human and natural factors other than forest practices and well beyond forest lands. Thus, proposals to further restrict forest practices should be based on credible scientific analyses of all major influences and a wide range of policy alternatives. To achieve this we believe that more extensive research is needed to help identify practices and policies for all primary land uses that are most cost-effective in improving aquatic habitat and fish populations. Furthermore, if public agencies determine that changes in management practices on private forest lands are necessary to achieve public benefits, policy approaches other than regulation (e.g., education, incentives) deserve serious consideration.

Issue

In the 1990s, populations of many wild anadromous (ocean migrating) fish species, declined to record lows in the Pacific Northwest. This generated widespread concern about the effects of human activities on these populations. Riparian forests along streams in the region are known to provide important ecological functions that benefit habitat of many fish species. Because timber harvesting and other forest practices may temporarily alter some of these functions, concerns have been raised that these practices cause unacceptable impacts to fish habitat and that further regulatory restrictions are needed.

Background

Low populations of wild salmon and other anadromous fish in the Pacific Northwest have increased public concerns about management practices that may affect fish habitat. Forest practices are of particular interest because many anadromous fish spawn and rear in forest streams, and important influences of riparian forests on aquatic habitats are now more widely recognized and understood. For example, trees that fall into streams can help create deep pools that provide key rearing habitat, and riparian vegetation supplies leaves and other material that help sustain the insects that fish feed upon.

Anadromous fish migrate over vast distances beyond forest lands and live for extended periods in a variety of other habitats. Their numbers can be greatly influenced by many non-forest management factors, such as hatchery practices, agriculture activities, dam construction, and urban development. Ocean conditions, harvest by humans and natural predators, and weather cycles that affect food supplies can be very important. Although the relative effects of these diverse human and natural influences have not been well defined, substantial increases in fish numbers in the 2000s in the region do

indicate that forest practices are only part of a complex array of environmental influences.

Forest practices clearly have the potential to alter the aquatic environment. In the past, poorly conducted logging practices were shown to cause erosion, stream sedimentation, and warmer water temperatures. Habitat was also reduced when woody debris was removed from many streams in the mistaken belief that it was harmful to fish. Such findings led to implementation of the Oregon Forest Practices Act in 1972, and to major rule revisions in 1994 that markedly increased protection of riparian areas on private lands. On state and federal forest lands, recently updated forest plans have mandated even greater restrictions for riparian areas. Habitat improvements from these policy changes are expected to increase, but may take many years to accrue.

Relative to other human influences, the need to further restrict forest practices in Oregon's riparian areas to improve fish populations is not clearly supported by objective scientific analyses, and such limits may delay desired improvements in fish habitat in some streams. For example, natural additions of woody debris to streams and regeneration of desirable riparian tree species can take decades. Active management can accelerate habitat benefits where they are a high priority, by carefully applying professional forestry, fisheries, and hydrology expertise. In areas threatened by fire and forest health hazards, the benefits of active management can far outweigh the risks of inaction. Carefully designed research can help identify practices and policies that are most cost-effective in improving aquatic habitat and fish populations.

Current riparian management restrictions that retain valuable timber and affect adjacent operations already represent a significant cost to many private landowners in Oregon. Where fish habitat improvements are needed to help address impacts of historical activities or current environmental influences other than forest practices, policies that encourage education and landowner incentives deserve thorough consideration when public benefits are desired from private lands.

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Salvage Harvesting

A position of the Oregon Society of American Foresters

The Oregon Society of American Foresters supports the well planned, timely, and careful use of salvage harvesting after uncontrollable events have killed or damaged large numbers of trees in a forest. Salvage harvesting can mitigate economic losses due to the event, recover useful wood products, reduce fire and safety hazards and create the desired environmental conditions for successful reforestation. Application of scientific principles by professional foresters and other resource experts can ensure that economically viable salvage harvesting will be conducted with proper consideration of environmental and social concerns.

Issue Salvage harvesting has generated considerable controversy, particularly when proposed on public lands. Some view salvage harvests as a way to use resources that would otherwise be wasted and to generate some economic benefits in impacted communities. Others view salvage harvests as causing additional harm to the environment and some also view salvage and other commercial harvesting on federal forest lands as inappropriate. In recent years these contrasting perspectives have resulted in major disagreements over salvage harvesting on public land, including legal actions to prevent or to expedite its use. Actions that delay salvage harvesting are an important issue because damaged trees quickly deteriorate and lose value, which can limit project viability and harvest system options as potential timber revenues decline.

Background Salvage harvesting removes timber from an area that has been altered by an unforeseen and uncontrollable event, such as wildfire, that results in large concentrations of dead and damaged trees. Salvage harvesting is a reactive treatment with the principal purpose of recovering economic value of the trees that have been damaged. Because dead and damaged trees decay quickly and consequently lose economic value, the timeliness of conducting salvage harvesting is imperative.

Since the late 1980's, major wildfires and forest health problems in the West generated numerous salvage harvesting plans on federal lands, many of which were appealed by interest groups opposed to the practice. In 1995 Congress passed the "Salvage Rider" (PL 104-19) to restrict such administrative appeals, an action that sparked further controversy and arguments between opponents and proponents of salvage harvesting. Although the Salvage Rider expired in 1996, the difference of opinions concerning salvage harvesting continues because of contrasts in philosophy as well as in the interpretation of science related to the issue. Some scientists believe that human intervention following wildfires should be a low priority and that "natural" recovery of the forest is most appropriate[1].

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[1] Beschta et al. 1995. Wildfire and salvage logging: recommendations for ecologically sound post-fire salvage logging and other post-fire treatments on federal land in the west. Report to Pacific Rivers Council, Eugene, OR. Available at: http://www.pacrivers.org

However, this approach largely ignores important economic and social concerns. Many other scientists and forestry professionals conclude that careful management of forests based on evolving research and experience can facilitate the development of desirable forest conditions.

Salvage harvesting triggers legal requirements for reforestation, which normally exceed the mandates for forest restoration following wildfires or other catastrophic events. Additionally, the money generated from salvage harvesting can help fund restoration practices that can mitigate some of the adverse impacts of the catastrophic event. Examples include erosion control, invasive weed control, and active reforestation. This is particularly important on federal lands where a portion of receipts from any harvest is dedicated to forest restoration.

Research on salvage harvesting is limited and has been subject to different interpretations. However, existing research indicates that variability among forest sites and harvest methods can result in similarly variable effects on forest resources. This variability points to the need for site-specific plans for salvage harvesting that address environmental, economic, and social concerns. Additionally, it is important to consider the environmental, economic, and social effects of not salvaging. Although the random nature of catastrophic events precludes the preparation of detailed, site-specific plans beforehand, the value of preparing preliminary salvage plans should be recognized and integrated with routine forest planning activities. Finally, an efficient public review and appeal process allows both adequate opportunities for constructive public input as well as timely implementation of approved plans.

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Clearcutting

A Position of the Oregon Society of American Foresters

The Oregon Society of American Foresters supports the careful, scientifically based use of clearcutting as a tool for meeting diverse management objectives, including desired conditions for the regeneration and health of important forest types. Current laws include many measures to limit potential negative effects of clearcutting on Oregon's private and public lands. Guidance from professional foresters and other natural resource specialists can further ensure that clearcutting is applied with prudent consideration of environmental, economic, and social concerns.

Issue New clearcuts are unattractive to many people and this contributes to the perception that clearcutting is harmful to the environment. This view is reinforced by vocal individuals and interest groups that criticize the practice publicly using graphic images and sweeping generalizations about its impacts. In this context, the term clearcutting often is used incorrectly as a derisive synonym for careless logging or permanent forest clearing. Although not widely recognized, professional foresters carefully define and prescribe clearcutting as a science-based tool for effective harvest and regeneration of unique forest types, while also following laws that directly address specific concerns about environmental impacts.

Background Most of the original, native forests of the Pacific Northwest were established after major natural disturbances, particularly wildfire. These fires cleared large areas of tree and plant cover, reduced disease and insect pests, and exposed mineral soil seedbeds. Such major disturbances are a key part of the ecology of native forest species such as Douglas-fir, which is "shade intolerant" and regenerates and grows best in the full sunlight of large openings.

As defined by the forestry profession, clearcutting involves removal of nearly all standing trees within a limited area for the purpose of regenerating a new forest (Dictionary of Forestry 1998). Some differences exist between clearcuts and naturally disturbed areas, but key similarities are shown by the proven success of clearcutting in regenerating native forests such as vast areas of Western Oregon historically dominated by Douglas-fir. Conversely, if harvest methods other than clearcutting are used persistently in such forests, local species composition and forest structure are likely to become different from natural stands.

Clearcutting is the most effective and economical way to harvest and regenerate important native tree species. Treatments that help ensure regeneration success, such as slash piling, weed control, etc., are efficiently applied in clearcut areas. Tree planting and young stand management practices, such as pest control, fertilizer, etc., show better effectiveness and lower costs when concentrated in clearcuts. Clearcutting also provides habitat for many plant and animal species that depend on forest openings. In addition, it can help in the local control of insect, disease, and wildfire hazards.

In Oregon, clearcuts are a temporary condition as the state's Forest Practices Rules require successful reforestation after harvest, which is ensured by over 99% compliance and the improved seedlings and methods that are now commonly used. State and federal laws also limit clearcut size and require that stream buffers, wildlife trees and woody debris be left to protect habitat and site productivity. In addition, legal and social concerns have led to greater

attention to locating and designing clearcuts to reduce visual impacts. In recent years, clearcutting in Oregon has constituted less than 25 percent of the harvested acreage, the rest being selectively cut or thinned.

Clearcutting is not appropriate in all situations, but where suitable and applied carefully by skilled professionals, it is a proven harvest and regeneration method for many areas of the Pacific Northwest. Careful planning and application of harvest and reforestation practices, in compliance with state and federal regulations, are key to avoiding negative impacts of clearcutting while realizing its benefits. Professional foresters are trained to understand both the risks and benefits of clearcutting. Working with other resource professionals, foresters can provide essential guidance for its proper application in meeting landowner objectives and broad public goals.

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