

HOW DO THE FSC & SFI STANDARDS  
ADDRESS THE FOREST SERVICE'S  
FOUR THREATS?

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## How Do the FSC & SFI Standards Address the Forest Service's Four Threats?

### Introduction

Forest certification has several goals – to increase consumer confidence in wood products, to provide an endorsed standard that can be used as a basis for evaluating forest management practices, to establish a market-based mechanism to recognize responsible forestry, and to offer an incentive for constant improvement in the industry.

When forest certification programs were first developing their standards, some of the leading forestry issues and concerns included chemical use, genetically modified organisms, endangered species, and clear cutting. In recognition of these issues, each program made a concerted effort to ensure their standard offered guidance on addressing these concerns. Many of these issues continue to be important, but over the years, new issues have also arisen. So, how well do the certification standards address the leading forestry issues land managers currently face in the United States?

In 2003, the USDA Forest Service identified the “Four threats to the health of the nation’s forests and grasslands<sup>1</sup>.” This Dovetail Report reviews the Forest Stewardship Council (FSC) Regional Standard for the Lake States-Central Hardwoods,<sup>2</sup> and the Sustainable Forestry Initiative (SFI) 2005-2009 Standard in relation to these forest management priorities identified by the Forest Service for the forestlands of the United States.

### Discussion of the Four Threats

The Four Threats identified by the USDA Forest Services are: Fire and Fuels, Invasive Species, Loss of Open Space, and Unmanaged Recreation. These threats encompass environmental concerns as well as economic risks and social conflicts. They are complex issues that require both long-term planning and short-term action to respond to immediate

#### Healthy Forests Make for a Healthy Nation

*Actions needed to address the Four Threats include:*

*Fire and fuels* —Restore healthy, disturbance-resilient ecosystems on lands at risk from catastrophic fire, improving the condition and function of critically important watersheds, and sustaining critical wildlife habitat nationwide.

*Invasive species* —Protect forest and rangeland ecosystems by preventing the release of non-native species and by controlling the spread, or eradicating, invasive species.

*Loss of open space* —Conserve the nation’s forests and rangelands most at risk due to subdivision and land conversion by working with partners, communities and landowners to balance development with sustaining ecosystem services and viable working landscapes.

*Unmanaged recreation* —Work with partners to develop travel management plans that regulate the use of OHVs on designated roads, trails, and parks in an appropriate manner.

<http://www.fs.fed.us/projects/four-threats/background.shtml>

<sup>1</sup> <http://www.fs.fed.us/projects/four-threats/index.shtml>

<sup>2</sup> The FSC Lakes States-Central Hardwoods Standard applies to Kentucky, Ohio, Indiana, Illinois, Iowa, Michigan, Wisconsin and Minnesota.

needs and growing risks. With relevance to the goals and objectives of forest certification, these four threats relate to a wide range of forest management issues, the sustainability of the forest resource, and responsible forest management. In many ways, these four threats differ significantly from the types of issues certification has addressed in the past. These threats can also be more difficult to respond to. For example, the issue of clear cutting may be addressed by setting a restriction on the maximum or average size of a clear cut or by having green-up requirements for adjacent management areas. On the other hand, fire risk issues are interwoven with a broad array of forest management activities and therefore require more complex solutions.

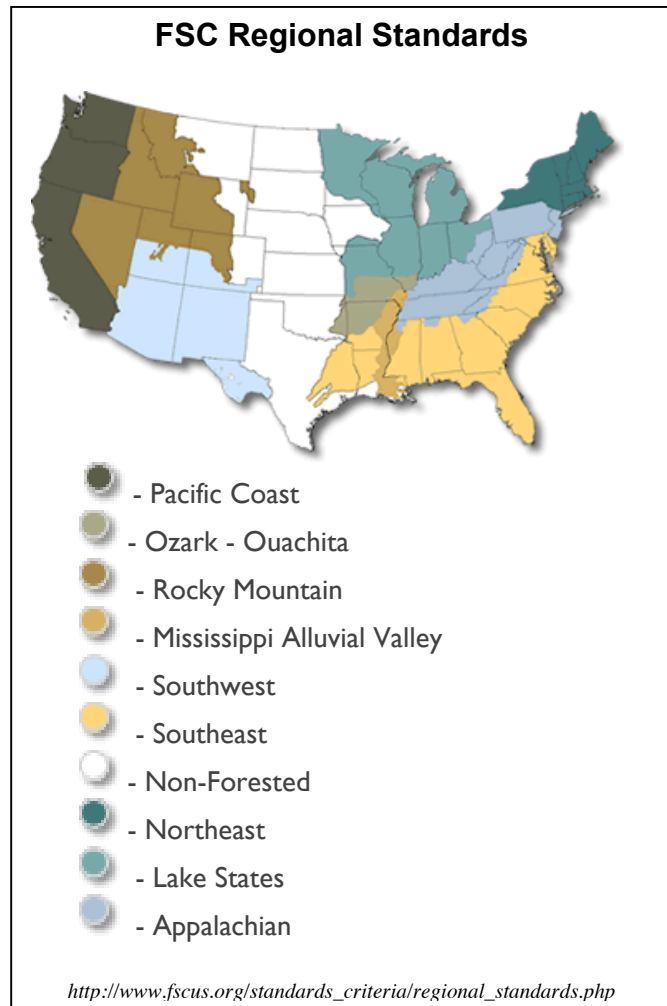
***Fire and Fuels***

From 1995 to 2005, there was an average of over 40,000 fires each year, affecting more than 1.6 million acres annually<sup>3</sup>. Research has been done in recent years to compare current forest fire rates and intensities to historic patterns. Although there is debate over what amount, return interval, and type of fire might be desirable to support sustainable forestry, research demonstrates that current fire intensities and fuel loads around the country are frequently above historic averages. More to the point, the increasing costs of fire suppression, due not only to forest conditions but also due to encroaching human settlements, are causing significant conflicts within agencies and communities.

FSC & Fire

For purposes of standards development, the Forest Stewardship Council (FSC) has divided the United States into nine regions. Each regional standard is based on a uniform set of guiding international principles as well as national criteria and indicators that apply throughout the United States. This report uses the standards for the Lake States-Central Hardwoods region as the basis of our evaluation of how the FSC addresses the four threats identified by the Forest Service.

The FSC Lake States-Central Hardwoods regional standard emphasizes the role of fire in relation to natural disturbance patterns. The introductory section of the standard includes information



<sup>3</sup> <http://www.nifc.gov/fireinfo/nfn.html>

describing the historic role of both fire and wind disturbances in this region, including the use of fire by indigenous populations.

In the FSC Standard, Principle 6, related to the environmental impacts of forest management, includes Indicator 6.3.c.4 that states, “Responses (such as salvage) to catastrophic events (such as wildfire, blowdown, and epidemics) are limited by ecological constraints.” The suggested verifiers for this indicator are the retention of coarse woody debris, den trees and snags, and allowing for endemic levels of pest populations.

The logging and site preparation requirements (under 6.5.b) state that site preparation activities should specify slash treatments to include the “reduction of fuels to moderate or low levels of fire hazard.”

FSC’s Principle 7 includes Fire Management, Prescribed Fires and Wildfires as elements that may be included in a Management Plan. Specifically, Indicator 7.1.d.3 states, “The management plan addresses potentially disruptive effects of pests, storms, droughts, and fires as they relate to allowable cut.” Also, 7.2.a, related to the periodic review and revision of the management plan includes a suggested verifier that states, “Relevant provisions of the management plan are modified in response to such changes as fire, market conditions, or damage to the road system.”

The final direct mention of fire in the FSC standard is in Principle 10 related to plantation management. Criterion 10.7 states that in plantations, “Measures shall be taken to prevent and minimize outbreaks of pests, disease, fire and invasive plant introductions.”

### SFI & Fire

The Sustainable Forestry Initiative (SFI) 2005-2009 Standard applies throughout the United States and Canada. The SFI Principle 4 related to forest health and productivity states that program participants shall “...protect forests from uncharacteristic and economically or environmentally undesirable wildfire, pests, diseases, and other damaging agents and thus maintain and improve long-term forest health and productivity.” Program participants are expected to have a written policy to implement and achieve this principle. This principle is further addressed in Objective 2 and Performance Measure 2.4 that includes three indicators used to verify compliance:

- “Program to protect forests from damaging agents,
- Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents, and
- Participation in, and support of, fire and pest prevention and control programs.”

Under the SFI Objective 4, related to wildlife habitats and biological diversity, Indicator 8 for Performance Measure 4.1 requires participants to have a “program to incorporate the role of prescribed or natural fire where appropriate.” This indicator is new to the SFI 2005-2009 Standard.

### *Suggested Changes to Address Fire in the Certification Standards*

In the Forest Service discussion of the fire and fuels threat, fire management's relationship with healthy ecosystems, watersheds, and wildlife habitat is highlighted.

The FSC standard could update the regional standard in relation to fire issues by including more specific environmental and social guidance for how wildfire risk and prevention should be addressed in management planning and monitored over time. The current guidance primarily discusses fire in relation to the potential economic impacts. It is also likely that the FSC Stakeholder Consultation process could be formally structured to include known issues such as the four threats identified by the Forest Service. Utilizing a widely recognized list of known concerns to help structure the consultation process, as opposed to relying solely on local groups and individuals to identify and prioritize forest management concerns (an onerous process in large scale assessments and one that has been widely criticized), may add efficiency and consistency to the process.

The SFI standard could be updated by including fire hazard education as part of Objectives 8 and 12 and as part of the education and outreach provided to family forest owners and the public. Also, similar to the FSC stakeholder consultation process, the auditor guidance included in the new SFI standard (in reference to utilizing meetings with third-parties as appropriate for determining conformance with the standard) may be an avenue to gather feedback on wildfire issues as well as the other threats identified and prioritized by the Forest Service.

### *Invasive Species*

There are about 400 invasive, nonnative plants in the U.S., impacting about 133 million acres already and spreading at a rate of 1.7 million acres annually<sup>4</sup>. These invasive species include plants such as knapweed and saltcedar; insects such as gypsy moth and Asian longhorned beetle; and diseases such as sudden oak death and dogwood anthracnose. The United States has a history of environmental damage from invasive species, including the Dutch elm disease and chestnut blight, which devastated two of our native tree populations. The growing challenge today is the rate at which new species are entering the country. With the growth in global trade and travel, humans aren't the only highly mobile species.

### FSC & Invasive Species

In the FSC standard, invasive species are addressed in relation to general forest health concerns similarly to how fire is addressed. The FSC also addresses invasive species in terms of the planned introduction of exotic species in forest management, including the planting of exotic tree species and the use of exotic biological control agents, especially as treatment for invasive species. In the FSC standard, Principle 6 addresses Environmental Impacts, and Indicator 6.8.a, states, "Exotic...non-invasive predators or biological control agents are used only as part of a pest management strategy for the

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<sup>4</sup> <http://www.fs.fed.us/projects/four-threats/key-messages/invasive-species.shtml>

control of exotic species of plants, pathogens, insects or other animals where other pest control methods are...ineffective.” Additional aspects of Principle 6 further explain the appropriate use of exotic controls, as in 6.9.b, “The use of exotic species is contingent on peer-reviewed scientific evidence that the species in question is non-invasive and will not diminish biodiversity.” Specifically, the example verifier for this indicator is “Non-invasive exotic plants that are sown to control erosion are used only when suitable native species are not readily available.”

The most specific mention of invasive species in the FSC standard is in 6.9.d, “Forest owners or managers develop and implement control measures for invasive exotic species.” Invasive species are also listed as an element to be included in the forest management plan, in association with other pest control topics under Principle 7. The control of invasive species is also required to be compatible with the protection of High Conservation Value Forests (HCVF) as described in 9.3.a.

Finally, under Principle 10 related to Plantations, the issues of justifying and documenting the use of exotic plant species are repeated in a manner similar to under Principle 6. Criterion 10.7 requires plantation managers to take measures to “prevent and minimize outbreaks of pests, disease, fire, and invasive plant introductions.”

### SFI & Invasive Species

As previously described in relation to fire, SFI Principle 4 and Objective 2 both address “damaging agents”, including undesirable wildfire, pests and diseases. Also, similar to where fire is mentioned in the SFI standard, invasive species are addressed under Objective 4 related to wildlife habitats. Indicator 7 for Performance Measure 4.1 states that program participants can indicate compliance with this performance measure through “participation in programs and demonstration of activities as appropriate to limit the introduction, impact, and spread of invasive exotic plants and animals that directly threaten or are likely to threaten native plant and animal communities.”

### *Suggested Changes to Address Invasive Species in the Certification Standards*

Both standards could be updated by providing a reference for determining what constitutes an “invasive species” or requiring applicants for certification to maintain a list appropriate to their region of operations. A reference to the list of invasive plants maintained by the Forest Service may be appropriate. Additional resources for invasive insects, diseases, animals, and other pests may also be needed. For the SFI standard, because of the risk of invasive species spreading across ownership boundaries, it is another issue that could be included in Objectives 8 and 12 and the information and outreach provided to forest landowners and the general public. Including invasive species control as a priority research area may also be appropriate in the SFI standard. It is a topic that could be required in the logger and natural resource manager education requirements of certification. Some SFI approved workshops in Wisconsin are offering invasive species training for loggers. Perhaps these workshops could be replicated through cooperation with other SFI State Implementation Committees. The FSC standard

may want to include invasive species as an element of Best Management Practices (BMPs) (6.5.b.). There are currently efforts in Wisconsin to explore the development of BMPs for invasive species and hopefully other states will follow suit.

An article in *BioScience*<sup>5</sup> discussed the threat of invasive species and suggested five elements that could be tracked to measure forest managers' efforts to prevent and respond to invasive species. The authors suggest that certification programs could include these metrics. The suggested metrics include: tracking the elimination of pathways for invasive species spread; managing to prevent new invasions; monitoring to detect invasions early and implement a rapid response; suppression of established invasive species populations through landscape scale monitoring and management efforts; and consideration of how eradication efforts affect forest ecosystems and sustainability concerns.

### *Loss of Open Space*

The Forest Service describes this threat in three parts: *habitat* fragmentation, *ownership* fragmentation (aka parcelization), and *use* fragmentation<sup>6</sup>. With these aspects in mind, clearly the loss of open space is influenced by social and economic factors as well as forest management decisions. Recent Forest Service research found that “over 44 million acres of private forest are projected to experience increased housing development by 2030.”<sup>7</sup>

### FSC & Open Space

The FSC standard does not use the terms open space or parcelization, but fragmentation is discussed. The emphasis in the FSC standard is on habitat fragmentation and its impacts on wildlife habitat and other environmental concerns. In the background section of the document the statement is made that “the northern subsection [of the Lake States-Central Hardwoods Region] is...characterized by...relatively little fragmentation while the southern section is dominated by...woodlots in an agricultural matrix.” Under Indicator 6.3.a.4, related to landscape level diversity, an example verifier is “Large forests are managed...to allow dispersal of species sensitive to fragmentation.” Within

#### Forest Service Research Shows Housing Development to Continue to Increase on America's Private Forests

Washington, June 21, 2005 - The study, *Forests on the Edge: Housing Development on America's Private Forests* study, was conducted by scientists in the agency's research stations and the private sector. It suggests that by 2030, housing density will increase substantially on more than 44 million acres or 11 percent of private forest land, --an area greater in size than New England. More than 200,000 acres of forested land in 15 watersheds nationwide are most at risk of development over the next two and a half decades.

*The Forests on the Edge study and maps can be found at:*

<http://www.fs.fed.us/projects/fote/>.

<sup>5</sup> Chornesky, Elizabeth A., et al. *Science Priorities for Reducing the Threat of Invasive Species to Sustainable Forestry*. *BioScience*: Vol. 55, No. 4, pp. 335–348. (available online at <http://www.bioone.org/>)

<sup>6</sup> <http://www.fs.fed.us/projects/four-threats/key-messages/open-space.shtml>

<sup>7</sup> <http://www.fs.fed.us/projects/fote/>

6.5 regarding stream crossings the requirement is that they be “located and constructed in a way that minimizes fragmentation of aquatic habitat...”

Although parcelization is not directly mentioned in the FSC standard, Principle 1 of the FSC standard related to legal compliance and the land manager’s commitment to the FSC Principles does have some relevancy. Within this section there are references to the prevention of illegal and unauthorized activities in the forest, including settlement. Indicator 1.6.a requires forest owners or managers to notify certifiers in the case of a change of ownership, and the example verifiers include tracking why clients leave the certified land base (applicable to group certificates), restricting the enrollment of “single-harvest-only” properties, and reporting changes in ownership.

The FSC standard also has restrictions on conversion of forests to non-forest uses.

**6.10. Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:**

- a) **Entails a very limited portion of the forest management unit; and**
- b) **Does not occur on High Conservation Value Forest areas; and**
- c) **Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.**

*Applicability Note: Forest management activities that are part of an approved management plan, including road construction and habitat restoration (such as creation of openings in the forest for wildlife habitat and the maintenance or creation of wetlands or prairies) are not conversions for the purposes of this criterion.*

6.10.a. Over the life of the ownership, forest to non-forest conversions are limited to the threshold of 1% of the forest area or 100 acres, whichever is smaller, except that a parcel up to two acres in size may be converted for residential use by the forest owner or manager.

### SFI & Open Space

The SFI standard does not directly mention open space, fragmentation, or parcelization. The introductory section of the standard does emphasize the significant role family forestland owners play in supplying the wood products industry and recognizes the importance of “maintaining viable commercial, family forest, and conservation forestland bases.” The SFI program recognizes the American Tree Farm System as a compatible forest certification program applicable to small, family ownerships. The American Forest Foundation’s (AFF) Standard of Sustainability for Forest Certification, the standard used to audit Tree Farms, includes requiring participating landowners to demonstrate a long-term commitment to a forest management plan (Standard 3).

The SFI Objective 12, related to landowner involvement in sustainable forestry, also describes the role of SFI participants in landowner outreach and education efforts. Specifically, program participants can demonstrate compliance through “participation in efforts to support or promote conservation of working forests through voluntary market-based incentive programs (e.g. current-use taxation programs, Forest Legacy, or conservation easements).”



### *Suggested Changes to Address the Loss of Open Space in the Certification Standards*

Because the loss of open space, as described by the Forest Service, is primarily viewed as a private, non-industrial lands issue, both standards could be updated by strengthening the elements of their programs that relate to family forests to include these concerns. For example, as the FSC's Family Forest Program interprets the FSC Standards for relevance to small properties this issue could be more specifically addressed. The Sustainable Forestry Board (SFB) that administers the SFI Standard could enhance their relationship with the Tree Farm Program and work cooperatively to ensure this issue is adequately addressed in the AFF standard used in auditing Tree Farms. The Forest Service also emphasizes that this issue requires collaboration with communities, landowners and others to identify solutions. Making this issue part of the stakeholder consultation process during certification assessments may be helpful.

### ***Unmanaged Recreation***

The amount and diversity of recreational activity on forestlands has caused increasing conflicts, not only between competing uses, but also between these pastimes and forest management. Camping, hiking, wildlife watching, hunting and fishing all put pressure on our forests, but motorized recreation has been the focus of most recent and growing concerns. The use of all-terrain vehicles (ATVs), snowmobiles, and sport utility vehicles (SUVs) to access and travel forestlands has put many land managers in the position of playing traffic cop as well as forester.

### **FSC & Recreation**

The FSC Standard does not directly mention motorized recreation, but does include recreation as a broad management issue and recreationalists as a stakeholder group to be consulted regarding management activities and planning.

Under Principle 4 related to Community Relations there is guidance given for identifying relevant stakeholder groups affected by management operations to include "...fishers, hunters and gatherers, recreationalists, water users..." Under Principle 5, Indicator 5.4.a, an example verifier related to diversifying forest uses and products is "compatible uses may include recreation, ecotourism, hunting, fishing, and specialty products." This indicator states that forest management should strive to strengthen and diversify forest uses and products for the benefit of the local economy while maintaining forest composition, structures and functions. Under Principle 7 related to management planning, recreational uses are identified among relevant cultural and socioeconomic issues. Recreational values are also included in the FSC glossary definition of Biological diversity values.

More indirectly, the FSC standard (6.5.b) addresses the need for land managers to both control access to forest roads as related to minimizing negative impacts to soils and other resources and to minimize erosion. This section of the standard also provides further guidance on water quality protections and road construction that can be relevant to the management of motorized recreation.

### SFI & Recreation

Similar to FSC, there is no direct mention of motorized recreation in the SFI standard, although the broad issue of recreation is addressed. The introductory section of the SFI Standard describes the many benefits that sustainably managed forests provide to society, including “numerous recreational opportunities.” Principle 1 related to Sustainable Forestry, reiterates this relationship between sustainable forestry and recreation and the SFI glossary definition of “sustainable forestry” is, “To meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates reforestation and the managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, biological diversity, wildlife and aquatic habitat, recreation and aesthetics.”

The SFI Performance Measure 12.2 and Indicator 3 state, “Program Participants shall support...recreation opportunities for the public, where consistent with forest management objectives.” An SFI Audit team is required to have training and experience in the relationship between forestry operations and recreation.

### *Suggested Changes to Address Unmanaged Recreation in the Certification Standards*

Unmanaged recreation, and motorized recreation specifically, is arguably the most significant current source of conflict over forest management and forestland use in many parts of the United States. While both standards recognize that recreation and recreational forest users are relevant to sustainable forestry, neither standard provides strong guidance on how these interests should be accommodated, inventoried, or monitored.

Understandably, the issue has increased in importance very rapidly, and even a few years ago when the standards were being developed, conflicts over recreational uses weren't on the radar screen like they are now. However both systems could be updated by making an effort to include this issue in their standards. The Forest Service emphasizes the need to work with partners to develop appropriate “travel management plans”. A requirement for this type of planning document and a stakeholder consultation process for developing it could be included in the certification standards for landowners or managers that have responsibilities for providing recreational opportunities.

## Conclusion

Overall, the FSC standard generally addresses the four threats identified by the Forest Service. Through the FSC stakeholder consultation process and requirements for scoping visits on large-scale projects and those including high conservation value forests, it is likely that major concerns will be identified and addressed during an FSC assessment. The FSC could ensure this likelihood by providing more specific guidance to what issues need to be explored and instilling more structure to the stakeholder consultation process. The FSC could also consider these four threats as it evaluates its program for family forests and reviews its regional standards.

Historically, the SFI standard has been most applicable to industrial lands where some of these issues may not have had as much relevance as they do on publicly managed lands and smaller, private ownerships. The increased use of the SFI standard by public land managers could provide the program with useful feedback on how it can continue to adapt to serve this land manager segment and its stakeholders. In addition, the SFI program could specifically update its ability to address these four threats primarily through enhancements to Objective 8 regarding procurement, Objective 12 related to engaging landowners and the general public, and through its relationship with the American Tree Farm System.

## The Bottom Line

For a number of reasons, fire, invasive species, the loss of open space, and unmanaged recreation are addressed indirectly in both the FSC and SFI forest certification standards as part of broader forest management health issues. Arguably, it is appropriate for the standards to be broad and a bit vague so that they remain applicable as the front burner issues continue to change overtime. Conversely, however, it could be argued that the current standards are so vague as to permit or prohibit almost anything solely at the discretion of the specific organization undertaking the audit. Vague standards limit certification's ability to address specific, current concerns in a meaningful way. Given the 5-year cycle of standards review and revision, this review cycle could function as the mechanism for staying relevant and the standards could realize increased benefit and impact through more timely, issue-specific wording and direction to auditors and their clients.

If forest certification is to truly increase public confidence in responsible forest management, and, perhaps even more importantly, gain the trust and loyalty of the forest industry and allied professions, certification programs need to improve their ability to forthrightly address the issues that really matter to key audiences in a timely manner. If a "certified forest" does not meet expectations on these hot-button issues, how well it addresses a whole range of other issues is potentially irrelevant.

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