

September 2002

Comparison of Two Forest Certification Systems and Oregon Legal Requirements
Final Report to the Oregon Department of Forestry

by

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Acknowledgements

Funding for the study was provided by the Oregon Department of Forestry, Forest Practices Program. The authors wish to acknowledge the extensive reviews of initial drafts that were provided by employees of the Oregon Department of Forestry, PriceWaterhouseCoopers, and the Sustainable Forestry Initiative Program. David Morman, policy program manager for the Oregon Department of Forestry in Salem, also deserves thanks for his vision and leadership, which made the project possible.

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Editing, word processing, design, and layout by Forestry Communications Group
Paper in Forest Policy (as yet unnumbered)
September 2002
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Abstract

Fletcher, RA, PW Adams, and SR Radosevich. 2002. Comparison of Two Forest Certification Systems and Oregon Legal Requirements. Paper in Forest Policy XX, Forest Research Laboratory, Oregon State University, Corvallis.

Oregon forest practices, mandated by state law, meet or exceed requirements of two commonly used forest certification systems in some key areas, such as regeneration, fire control, protection of water resources and endangered species, and visual and air quality. Standards of certification systems differ from Oregon forest practice law not only in that they are voluntary, but also in that they arise from different philosophies and approaches and are designed to meet somewhat different objectives. Oregon law is mostly concerned with protecting public assets while recognizing the importance of growing and harvesting trees. Forest Stewardship Council (FSC) systems are the most detailed regarding environmental impact of forest management, and they are most concerned with socioeconomic questions such as land tenure, economic viability of operations, and responsibility to communities. Sustainable Forestry Initiative (SFI) standards are directed at several highly visible public concerns about forest management; namely, sustainability, reforestation, special-use areas, water quality, and chemical use. Certification systems address whole ownerships and management systems, while Oregon law focuses primarily on management practices.

FSC systems require meeting or exceeding all laws, while SFI requires meeting laws pertaining to water quality, chemical use, reforestation, and labor practices. The two FSC certifiers examined, SmartWood and Scientific Certification Systems, have similar certification guidelines, but they differ significantly in emphasis and detail. They also differ in some ways from the FSC national indicators, which are the blueprint in the United States for development of all FSC

regional rules. Each of the systems examined, including Oregon law, has at least one area in which it exceeds the others in emphasis. Under both Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) standards, forest landowners in Oregon must meet higher requirements than in states without comprehensive forest practice laws and rules.

Table of Contents

Study Background

Oregon Forest Laws and Forest Certification in Perspective

Study Findings

 Overall Summary Points

Implications of Findings

Program Administration and Process

Forest Planning and Monitoring

Forest Management Practices

Environmental Considerations

Socioeconomic Considerations

Study Background

The purpose of the project is to document, compare, and summarize the various standards and requirements of Oregon forest landowners under applicable state and federal laws, with two major voluntary forest certification systems. It is not an assessment of implementation, but instead a policy analysis. Specifically, this analysis focuses on the following tasks:

1. Summarize and report on the current standards and requirements for Oregon private forest landowners to become certified under:

- The Forest Stewardship Council (FSC) system, using SmartWood and Scientific Certification Systems (SCS) certifier standards and FSC national indicators, and
- The Sustainable Forestry Initiative® (SFI)SM Program.

2. Examine, summarize, and report on the current standards and requirements that Oregon private forest landowners must meet to comply with state and federal laws applicable to forest management and related practices. Other laws (e.g., labor, safety, etc.) are included only in generalized analyses as they pertain to forest practices.

3. Analyze and report on how compliance with Oregon and federal laws satisfies current standards and requirements for certification under the FSC and SFI programs.

This study compares the legal requirements facing Oregon forest landowners with the required standards of two widely used forest certification systems, Forest Stewardship Council and Sustainable Forestry Initiative Program. The study examines the FSC standard as it is applied in two different certifier guidelines and it examines the FSC national indicators for the United States, which are a blueprint for developing regional rules. The study also examines the SFI system-wide standards and procedures for completing verifications, but does not examine verification audit procedures for any specific organization.

Only the third-party options for each of the certification systems were examined in this study. Provisions that do not require third-party verification are not covered. Stewardship Agreements,

although optional under Oregon forest law, were examined in this study because they are comparable in some ways to voluntary certification systems.

The FSC guidelines used were those designed to use with management of natural forests. Plantation guidelines of FSC were not examined because the only forests in Oregon that fit the FSC plantation category are converted agricultural fields, which mostly contain poplar plantations and are an insignificant percentage of overall forest base.

Completing this analysis involved consultation with ODF Forest Practices and Forest Resources Planning Department staffs for accurate evaluation of state and federal laws and regulations. It also involved review by FSC, SFI, SmartWood, SCS, and personnel of the accounting and auditing firm PriceWaterhouseCoopers for advice on study approach, supporting documents, and draft reports.

Extensive reviews of initial drafts were provided by employees of the Oregon Department of Forestry, PriceWaterhouseCoopers, and the Sustainable Forestry Initiative Program. FSC representatives and certifiers were provided an opportunity to review the drafts, but did not do so. Reviews were conducted to ensure accuracy. Findings and implications are the conclusions reached by the solely by the authors and do not represent a consensus among the reviewers.

Primary documents used for this study were the most current versions available of:

- The Oregon Forest Practices Act (OFPA) and related Administrative Rules (OARs) for forest lands and operations.
- Other Oregon Statutes (ORSs) and Administrative Rules related to forest-land use and operations.
- Sustainable Forestry Initiative, 2001 version (Sustainable Forestry Initiative Standard 2000, 2001, 2002, 2003).
- RIEE/SmartWood Oregon FSC Certification Guidelines, 1999 version.
- Scientific Certification Systems Forest Conservation Program, 1995 version.
- FSC National Indicators, February 2001 version.

Any study focused on evaluation of evolving systems is made more difficult by ever-shifting standards. All the systems under study were changing as this report was being completed. The SFI program, for one, made a number of changes that were approved for use beginning in January 2002. Where known and appropriate, we have made comments on forthcoming changes in the various systems.

While each certification system concentrates on slightly different environmental or management issues and uses somewhat different terminology, the intent of this study is to compare and contrast the systems in light of a common set of terms about the relevant forestry issues. Thus, this analysis was guided by the certification categories shown in Table 1.

1 Oregon Forest Law and Forest Certification In Perspective

Oregon's system of forest laws and rules has a rich history. Beginning with a reforestation act in 1941, Oregon has been a national leader in conserving forest lands and protecting public assets such as air, water, fish, and wildlife. During the decade of the 1970s Oregon implemented the nation's first comprehensive Forest Practices Act (1972) and a land-use planning law (Senate Bill 100 in 1976), which required commercial forest land to be identified and protected from development. Numerous changes have been made to the forest practices act, and the land use laws have been reaffirmed throughout the remainder of the 20th century.

The practice of certifying a forest as well managed began in the United States in 1941, when the American Tree Farm System was established as a public relations program to communicate forest management efforts on private lands to the public. Tree Farm, now sponsored by the American Forest Foundation (AFF), was not created in response to pressures in the marketplace, as some current systems have been. Membership has always been limited to properties that have passed inspection by a tree farm inspector appointed by AFF.

Since the early 1990s, many new certification systems have appeared. In 1993, the Worldwide Fund for Nature and other environmental groups created the Forest Stewardship Council (FSC), with an international certification system. The intent was to protect tropical forests and to help tropical timber producers avoid boycotts of their products in Europe's environmentally sensitive wood product markets. The FSC is a worldwide, nonprofit membership organization with three voting chambers dealing with the economic, environmental, and social aspects of forest management. The FSC has adopted 10 worldwide forest management principles and associated criteria. In addition, FSC accredits and oversees international organizations to conduct FSC certifications, and leads in the development of regional certification rules.

The United States based American Forest & Paper Association (AF&PA), an industry trade group, began developing its own certification system in the late 1980s based on public polling, which showed concerns about forest sustainability. Initially the SFI Standard and Program guidelines were developed to include self-reporting by members. Since its formal introduction in 1995, the SFI Program has been modified substantially, so that it now includes a third-party verification option with mandatory core indicators. The Sustainable Forestry Board, an appointed committee composed of 40% AF&PA members and 60% non-member stakeholders, now manages the SFI program. Although directed primarily at its member companies, the system has expanded to include other private and public ownerships through a licensing arrangement.

Worldwide, certification systems have proliferated rapidly over the past decade. At least 40 different systems are known to exist currently. This project examines two major systems used in the United States. This does not imply that these systems are the only valid ones to consider.

Here is a brief glossary of terms pertaining to certification:

- **Assessment:** The process of determining whether a forest operation meets the criteria for a particular certification scheme.
- **Chain of custody:** Ability to track a product from the beginning of production (harvesting trees in the forest), along the processing and marketing channels to the final consumer.
- **Eco-label:** Proprietary symbol used to identify a product that has been produced to a given environmental standard.
- **First-, second- and third-party certification:** Refers to who sets the standards and administers the certification system. If done by self, it is considered first-party. If done by a trade or other related organization, it is generally considered second-party. If done by an independent organization, it is third-party.
- **Performance-based:** Qualification for certification is determined by assessing applicant performance against a set of measures set by the certifier.

- Systems-based: Qualification for certification is determined by examining the environmental management system that an applicant is using, and determining its compliance with the certification system.
- Verification: Process of verifying compliance with a set of certification criteria.

A more-complete discussion of the evolution of these and other certification systems is included in “An Introduction to Forest Certification,” EC 1518, available from the Oregon State University Extension Service, Corvallis, Oregon. More information about Oregon's forest laws can also be obtained either from the Oregon Department of Forestry or the OSU Extension Service.

Study Findings

This study provided much insight into the similarities and differences of Oregon's extensive legal requirements for forest landowners and the FSC and SFI certification systems. Although all three sets of standards are changing through time, the points below address not only differences in these standards, but also differences in the processes and philosophies that drive each system. Listed below are some of the key points that came out of the analysis. Following these are some implications for landowners, certifiers, and Oregon's policy-makers. Finally, summaries for each of the five major categories are presented.

2Overall Summary Points

1. Oregon law is mostly concerned with protecting public assets while recognizing the importance of growing and harvesting forest products. For public resources (e.g., water, endangered species, visual quality, air quality) Oregon law has more-detailed requirements than do the certification systems.
2. Certification systems assess whole ownerships and management systems, while Oregon law looks at only certain components of the forest and forest management systems.
3. FSC systems require meeting or exceeding all laws, while the SFI program currently refers to meeting certain legal requirements (i.e., water laws, chemical laws, reforestation laws, and labor laws). Under both certification systems, Oregon operations must meet higher requirements than those in states without comprehensive forest practice laws and rules.
4. The SFI Program is directed at several highly visible public concerns about the impact of forest practices (i.e., sustainability, reforestation, special-use areas, water quality, and chemical use).
5. The SFI program does not explicitly address many socioeconomic concerns considered under the FSC certification systems (e.g., responsibility to communities, land use and tenure, and economic viability).
6. FSC criteria are most detailed regarding adverse environmental impacts of forest management and the monitoring and correction of such impacts.
7. The two FSC certifiers examined, SmartWood and Scientific Certification Systems, have similar certification guidelines but they differ significantly in emphasis and detail. They also differ in some ways from the FSC national indicators, which are the blueprint in the United States for development of all FSC regional rules.
8. Each of the systems examined, including Oregon law, has at least one area in which it exceeds the other systems in emphasis.

- The SFI program provides specific and extensive direction for support of forestry research, training of employees and contractors, and special considerations for visual management of the landscape.
 - Oregon law and administrative rules contain extensive direction for regeneration, air and water quality, and fire control.
 - The FSC systems have significant detail regarding required components of written plans, community relations, and chain-of-custody and labeling of certified products.
9. Core or minimum standards are common to all systems. In addition to required core indicators, the SFI Verification Program also lists many additional indicators that may be used. FSC or SFI participants in certification programs must show their commitment to continuous improvement over time, a different target from the minimum standards required by Oregon law.
10. Verification under the SFI Program follows well-established accounting and auditing procedures used by major businesses, whereas the FSC system allows accredited certifiers to develop their own auditing systems with some overall direction in procedures.
11. The FSC system includes peer review of the assessment report with the goal of providing an objective and scientifically credible assessment. The SFI Program and Oregon legal process do not include peer review, although ODF decisions about compliance with laws may be appealed.
12. The FSC and SFI systems appear to be converging on transparency and level of performance required. The SFI system has undergone extensive changes during the past year in order to become a stronger third-party certification system. The FSC network is also changing, moving its headquarters closer to world business centers and making certification more accessible to smaller owners through group certification.

Implications of Findings

Implications for Oregon Forest Landowners

Certainly certification is on the minds of many of Oregon's private and public forest owners. A September 19, 2001 certification summit in Corvallis was one in a number of certification meetings recently held to help owners understand various certification options. Demand for certified wood products appears to be on the rise, and these products are beginning to show up on the shelves of such retail giants as Home Depot. .

This study reveals that Oregon landowners appear to be at or above the level of the SFI and FSC certification systems with respect to a number of categories of analysis, specifically water quality, air quality, regeneration, and fire control. If Oregon forest owners find it necessary to become certified, to retain access to wood markets or for other reasons, they will have to make fewer adjustments in management practices than forest landowners in states and countries without a comparable array of legal requirements. If certification were to be widely adopted, it would force other wood- growing regions to meet Oregon's high regulatory standards and the higher operational costs associated with them. This is good news. A bit of bad news to date is that Oregon landowners have been imposing higher costs on themselves through a stricter state legal standard, but they are not being rewarded for it in the marketplace.

Oregon forest landowners who embark upon the certification systems examined in this analysis must exceed the legal standard in certain categories, specifically written plans, inventory of resources, monitoring impacts, documenting commitment to community economic

viability, and record-keeping for chain of custody. How much they have to do depends on which system they choose. For example, under the SFI system, their current use of herbicides in the forest, which is controlled by state and federal law, may be adequate, but if they choose the FSC system they may be required to make significant changes in herbicide use and documentation.

One striking difference between the certification systems and state law is that the law does not require a comprehensive written management plan. Both the FSC and SFI systems require a written plan for third party audited certifications. A written plan is also required for other popular certification systems such as the Tree Farm Program. .

3 Implications for Certifiers

The SFI and FSC should be able to use the results of this study when conducting audits of Oregon properties, to locate areas in which Oregon landowners are likely to be strong or weak. This should allow certifiers to streamline audits of Oregon landowners, and possibly make these audits cheaper. This process could likely be enhanced if findings from inspections conducted under the Forest Practices Act were shared with certification audit teams.

The SFI and FSC should also be able to see from this analysis where their systems measure up to a democratically produced set of forest laws and guidelines that were the product of a wide array of stakeholders in Oregon over the past 50 years. The comparisons in different categories of analysis should be useful in these organizations when they are determining the standard that is adequate for a given category.

Although it was not the primary intent of this study, the summary tables also allow for comparing the SFI and FSC systems. The two systems have many things in common, but definitely require different standards in specific categories. Whether one system is better or more credible than the other depends on what categories and issues are of greatest interest. For example, while the SFI system has more detail about ensuring that workers have adequate training, the FSC system concentrates more on ensuring that they receive fair wages and long-term employment. In this analysis, there does not seem to be a clearly superior system for all categories analyzed.

Implications for Oregon's Policy-Makers

A major point reinforced by this study is that Oregon has an extensive set of laws and regulations to protect public assets such as air, water, and fish and wildlife, as well as the well-being of Oregon's citizens. Oregon policy-makers and citizens have long been national leaders in recognizing the need to protect these assets, and they have enacted various legislation such as a Reforestation Act, Forest Practices Act, land-use planning laws, and worker-protection laws. All these laws and their attendant administrative rules have served the purpose of protecting public assets, but they have also increased the cost and complexity of managing forests in Oregon.

The Oregon Board of Forestry may find this study useful in examining the regulatory burden being placed on landowners, and consider strategies to help landowners recover some of regulatory cost in the marketplace. The Board of Forestry may also want to examine collaborative data-sharing strategies with certifiers that will allow certifications to take place in a more efficient manner. Finally, the Board may want to increase the requirements of the

stewardship agreements to allow participating landowners the dual benefit of lower regulatory cost and the opportunity of becoming certified under one or more of the certification systems.

Program Administration and Process (Table 2)

Summary Points

- Fundamental differences in philosophy exist between laws and voluntary certification systems. While landowners are required to comply with all laws, certification systems measure how well they conform with specified criteria and standards.
- The FSC and AF&PA are membership organizations, with members and program staff having a direct ability to influence certification rules and programs through committee appointments and other internal input. In the FSC, major policies can be made through a vote of the membership. In the SFI program, the Sustainable Forestry Board approves all policy and rules.
- FSC membership is composed of a wide range of organizations including forest product buyers groups, forest landowners, labor unions, churches, and environmental organizations. The SFI Program is also composed of different types of organizations including forest landowners, forest products manufacturers, conservation organizations, universities, state and county land management agencies, and others through their membership in the AF&PA or a licensee's program. The FSC certifiers examined represent both a for-profit company (SCS) and a nonprofit network of partners (SmartWood), while the SFI verifiers represent for-profit businesses.
- The length of time various programs and associated organizations have been in operation varies. Oregon forest laws and rules have been evolving over the past 60 years, beginning with the Forest Protection Act of 1941. In contrast, the certification systems have been in operation only since the early 1990s, with FSC starting in 1993 and the SFI program introduced publicly in 1995 after several years of development.
- Oregon forest laws and rules come about through a public process with mandated transparency, stakeholder input, and opportunity for change through the electoral process. The certification systems have some stakeholder input into setting of standards, but their processes are generally less transparent than the state legislative process.
- While certification system standards are reviewed and updated at the pleasure of the system manager, the Oregon Forest Practices Rules require annual review by the Board of Forestry in consultation with other state agencies, and revision in a public forum as needed.
- While Oregon laws require an operation-by-operation notification, the certification systems look at the whole ownership or ownership block at a point in time. While a Forest Practices Forester may never examine an individual property on site, field inspection is required for both the SFI program and FSC systems before certification status is granted. Individual forest practices are not examined under the certification systems unless they fall under the sampling done at the time of assessment. In essence, Oregon law looks carefully at the parts whenever an operation is done, while the certification systems look at a sample of the whole of the forest ownership.
- Oregon law tends to focus on specific targets and the use of best management practices, (i.e., reforestation standards, riparian area protection, stream and wetland protection, and resource

site protection standards), while certification systems tend to look at broader resource issues (profitability, biological conservation, equity for workers and communities).

- Verification within the SFI program involves third-party audits from professional accounting and auditing businesses and forestry experts. In addition, the Forest Monitoring Program of the External Review Panel makes external input into the SFI program. FSC assessments generally include only forestry experts.
- Verification within FSC certifiers also varies considerably. While the SmartWood system treats all criteria with somewhat equal weight. The SCS system includes weighting of various criteria in order to put the highest score on the most important criteria.
- The Oregon legal system has included monitoring of system effectiveness, while the certification systems to date have not released any information showing that certification has improved forests or forest management practices.

Not all Oregon Forest Practices rules are subject to enforcement action. The Oregon Department of Forestry has guidance documents that instruct Forest Practices Foresters rules to be specifically enforced and ones subject to general resource protection status. Rules are enforced with civil penalties of up to \$5,000 or criminal actions when damage has occurred.

- If they break the law, Oregon forest landowners are faced with potential criminal and/or civil penalties for each operation or practice. Failure to meet certification conditions for either of the certification systems is handled under the contract with the certifier and can result in loss of certified status by the landowner. In the case of AF&PA, not meeting the SFI standards can also be grounds for expulsion of members or licensees.
- Under the FSC, certifiers can also be punished for poor performance in doing certifications by having their accreditation removed. The biggest potential threat for certifiers performing either FSC or SFI certifications is that their reputation might be discredited and clients would not hire them for assessments.
- A dispute during a forest operation or while an assessment audit is in progress is generally handled within the organization involved (either ODF, FSC certifier, or SFI auditor).
- Dispute resolution processes are in effect for both Oregon laws, and for the two certification systems, although some minor differences in process exist.
- Oregon Department of Forestry appears to have the most specific requirements for both experience and formal education for employees it hires. The department also offers extensive and ongoing training to ensure competency of personnel. Of the certification systems examined, the SFI program has the most stringent criteria for training and credentialing of certifiers. Their system is based on professional accounting and auditing practices with specialties in sustainable forestry auditing; forest-certification auditing requires specialized training. The FSC and SFI systems both recruit teams of forestry experts for their assessments based on the reputation and experience of the team members. The SFI program also requires that one member of the team be a forester as defined by the Society of American Foresters. SmartWood has a formal training package for potential assessment-team leaders and members.
- Of the three systems examined, Oregon's legal system has the highest level of transparency to the general public through mandated public hearings and reporting requirements. Both FSC

and the SFI program seek external input about their programs, but they reserve decision-making for private sessions of appointed committees. The FSC rules committees operate at regional, national, and international levels. The SFI program is directed by the Sustainable Forestry Board, a committee of AF&PA members (40%), and non-member stakeholders (60 %).

- The public has open access to landowner notifications of operations and other reports done by the ODF. In contrast, only selected information (public summaries) is available from FSC certifications, and SFI third-party audit disclosures are not required. Public agencies undergoing an FSC or SFI certification, however, require full disclosure of the entire certification process.

The systematic and public process to develop and administer state laws and rules results in relatively objective and consistent policies and applications.

- The certification systems examined are an interesting mix of types of organizations. FSC and AF&PA are both nonprofit membership organizations, with different memberships. The SmartWood Network is composed of nonprofit organizations, while SCS is a for-profit company.

Forest Planning and Monitoring (Table 3)

Summary Points:

- The FSC National Indicators and SmartWood systems require the most comprehensive written plan of any of the systems involved. The SFI requires a plan, but allows a wide choice of plan components and forms, therefore it is unclear what is actually mandatory. Legal requirements are only for operation-by-operation plans and notifications, rather than a comprehensive management plan. If a landowner chooses the stewardship agreement process, more documentation is required, but only for topics dealing with complying with state laws, so the written plan is still less comprehensive than the other systems.

- All the certification systems examined require inventory of significant resources. Differences include items such as non-timber products, road classifications and “High Conservation Value Forests,” which are required under FSC systems but not explicitly by SFI. Oregon’s Forest Practice laws require landowners to inventory to determine a need to reforest. In addition, when filing notification of operations, slope, evidence of slope instability, and distance to water bodies (lake, stream, channel, wetland) must be noted. Where timber harvest in riparian management areas is planned, tree inventory is needed to identify which, if any, may be cut. Inventory of other resources and features generally is optional, although state agencies may inventory locally important resource sites that may affect management options for landowners. However, even in the case of stewardship agreements, the comprehensiveness of the inventory required by Oregon law is less than for FSC certification systems.

- Oregon requirements do not directly address sustained yield, but instead approach it via reforestation requirements, green-tree retention, clearcut restrictions and riparian management area (RMA) retention requirements. By contrast, the SFI and FSC systems specifically require calculation of and adherence to sustained yield. The SCS system, in particular, places great emphasis on sustained yield.

- The FSC systems require sustained yield of non-timber forest products, while SFI and legal systems are silent on this issue.

- While all systems require some monitoring by landowners, the certification systems require more monitoring than does the law. The SmartWood and FSC National Indicators require collection of relatively extensive biological and other data (current practices and environmental impacts) to use for adjusting management practices. SFI concentrates monitoring on clearcuts (visual aspects), training, and flow of information about the SFI.
- While all the FSC systems require complete chain-of-custody tracking, the SFI system currently has no provision for it. The State requires log branding and source identification for logs sold to mills, which amounts to at least a partial chain-of-custody. SFI has plans in the works for a non-chain-of-custody-based eco-label by fall 2001.

Forest Management Practices (Table 4)

Summary Points

- Prompt reforestation with native species following harvest is required under all certification systems and Oregon law. Oregon legal requirements are the most explicit and detailed of any of the systems examined. Besides use of native species, FSC systems are more restrictive by requiring maintenance of the native or natural forest type; plantations of native species are not equivalent to natural forests under FSC guidelines.
- FSC National Indicator and Oregon law address soil and residual-tree protection under provisions for site preparation. SmartWood and SCS are not explicit about site preparation requirements, while SFI offers minimal guidance.
- All systems emphasize use of locally adapted sources and use of either artificial or natural regeneration. Use of genetically modified organisms is specifically prohibited under the FSC systems, allowable under SFI, and not addressed by Oregon law.
- SCS and SmartWood have some emphasis on stocking control and intermediate stand treatments, whereas Oregon law and the FSC National Indicators address stocking through requirements for harvest and subsequent reforestation (e.g., minimum stocking, free-to-grow status).
- All systems allow forest fertilization, although the FSC national indicators emphasize productivity management through natural cycles, rather than reliance on inputs of human-supplied nutrients.
- All systems except SCS recognize both the prescriptive use of fire and the control of catastrophic wildfire. Oregon law provides the most detailed and specific directives regarding fire management and control.
- All systems recognize the need to control or limit major pest or pathogen problems. FSC, however, emphasizes prevention and maintaining natural cycles and processes to minimize problems.
- Oregon law, SCS and SmartWood recognize roads as necessary part of forest management. SFI and FSC National indicators have no explicit statement about roads.
- All systems assume that some timber harvest will occur.
- Both SFI and FSC emphasize efficient utilization and minimizing waste. FSC National Indicators emphasize “optimal” use and broad interpretation of forest goods and services.
- All systems except Oregon law emphasize training and supervision of personnel for management of forests. SFI places the greatest emphasis on training and supervision, imposing

substantial requirements for participants. Oregon law requires some training and licensing of pesticide operators.

Environmental Considerations (Table 5)

Summary Points

- FSC systems emphasize maintenance of ecological functions as a primary means of addressing forest productivity, species diversity, and landscape-level concerns. SFI does not explicitly address ecological function, and Oregon law makes only limited reference to it. SFI and Oregon law focus on dealing with symptoms of long-term productivity loss and less on linkages between function and productivity.
- All systems address threatened and endangered species and other species-conservation concerns. SFI and FSC emphasize biological conservation through habitat management. FSC systems provide the most specific and potentially significant directives (i.e., they designate old-growth and other unique forest types as more important to protect and refer to them as High Conservation Value Forests. Oregon law addresses biological and species conservation through the protection of inventoried resource sites on private lands and extensive reserves and habitat management areas required by law on public lands.
- All systems except Oregon law give specific consideration to landscape-scale concerns. SFI and FSC National Indicators provide specific direction for management at various appropriate scales through the landscape level.
- All systems except the SFI require justification for the use of exotic species.
- Oregon law and the FSC systems have explicit requirements for protection of special areas and reserves. SFI requires “special consideration,” but it is unclear how protection is assured. FSC systems also require general reserve areas to be set aside on every property.
- Oregon laws recognize the need to protect the “waters of the state,” and include more specific and detailed requirements for water resource protection (for example, riparian widths, minimum basal area requirements) than do any of the certification systems examined. The high Oregon legal standard for water-resource protection means Oregon landowners who participate in certification systems requiring compliance with state and local water laws must follow stricter water-protection standards than landowners certified under the same systems in states and regions with lower water-protection standards.
- The SmartWood system requires culverts large enough meet a 100-year flood, while the Oregon law requires that culverts meet a 50-year flood standard and allow passage for both juvenile and adult fish.
- The approach of the certification systems to water resource protection is generally that of continuous improvement, while the Oregon law sets minimum standards. The Oregon legal system permits optional alternative operations plans for restoration and enhancement of degraded sites along water.
- All the systems examined address soil resource impacts and soil protection. There is considerable overlap in considerations for protection of soil and water.
- The FSC national indicators place some emphasis on restoration of areas of damaged soil, but the other systems and the Oregon law are silent on this topic.

- None of the systems examined prohibits the use of chemicals, but all require careful and controlled use. Federal and Oregon laws on pesticides have specific and detailed directives for use and safety.
- FSC systems require reduction and eventual elimination of chemical use. The FSC national indicators reference a list of FSC-approved chemicals for use in the forest. This list excludes some legal chemicals.
- As with water, Oregon law recognizes air as a public resource and requires special measures (such as regulation of slash burning) to protect air quality. Certification systems do not refer specifically to air quality, although some protection is inferred and deferred to state law.

Socioeconomic Considerations (Table 6)

Summary Points

- Oregon law and the FSC systems discourage conversion of forestlands to other uses. Protection of important forest areas is mandated under Oregon law. The FSC systems require evidence of intent of the owner toward long-term forest tenure, and require consideration of indigenous peoples' rights (access and others). The SFI is silent regarding land use and conversion.
- All systems include some requirements for community and cultural relations, but the nature and emphasis of these requirements varies. FSC systems emphasize community-level and neighbor considerations and responsibilities, while SFI targets efforts to the broader "public," with some reference to local involvement. The Oregon legal process focuses heavily on protection of public assets and rights. It also requires public access to information about inspection of forest operations and other agency business.
- All systems address worker relations and safety, but through different approaches. Oregon law uses extensive safety codes and worker-rights rules, combined with licensing and inspections, to ensure a safe working environment and adequate consideration of worker rights. The SFI system relies on training requirements to ensure that workers are well prepared and safe, but is silent on worker rights. The FSC systems focus on collecting evidence of certain indicators of the social and economic well being of workers to ensure that workers are well paid, well prepared, and have a safe working environment.
- The FSC systems place clear emphasis on establishing that an operation has long-term economic viability and stability as a means for sustainable forestry. FSC requires reinvestment of earnings in the forest through management practices and infrastructure. The SFI system does not specifically identify how to evaluate economic viability, and Oregon law makes a broad reference to it through rules that require maintenance of the forest land base and of productivity.
- The FSC systems specifically require compliance with all applicable state, federal and local laws and regulations, while SFI currently mentions only specific laws and regulations for required compliance (i.e. water-quality laws, reforestation laws, chemical use laws). SFI program participants have to comply with all applicable laws under newly approved guidelines, which were implemented January 1, 2002.
- Consideration of visual management and aesthetics is addressed under all systems except the FSC national indicators. The SFI gives significant emphasis to maintaining visual quality in

general, while Oregon law requires visual management primarily along designated state and federal “scenic highways.”