

Forest Certification and Biodiversity

Verifiable Metrics for Large Working Forests

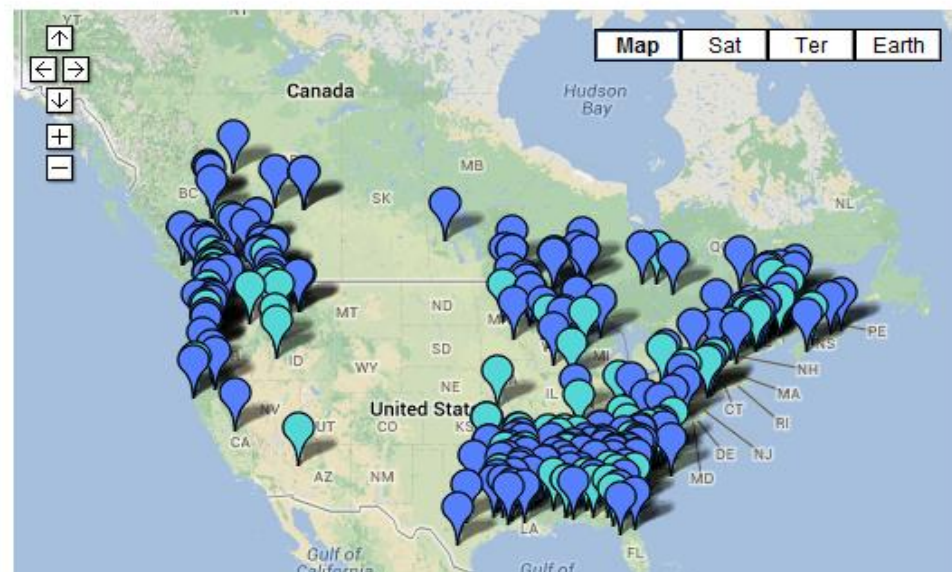
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Two Primary Forest Standards for Large Working Forests: SFI and FSC

- Both are structured under a similar set of guiding principles
- Both build upon compliance with laws, regulations, science, and best practices
- Both address wildlife and biodiversity in the context of a verifiable framework

SFI Forest Management Certificates

Dark blue pinpoints represent SFI Forest Management certificates and teal pinpoints represent SFI procurement/fiber sourcing certificates.



FSC Forest Management Certificates

Yellow pinpoints represent FSC Forest Management certificates and green pinpoints represent FSC Forest Management GROUP certificates.



SFI

Principles provide the *vision and direction* for sustainable forest management



Objectives fundamental *goals* of sustainable forest management



Performance Measures a *means of judging* whether an objective has been fulfilled.



Indicators a specific *metric* for environmental performance

SFI Principles Addressing Wildlife and Biodiversity

Principle 3. Protection of Water Resources

Principle 4. Protection of Biological Diversity

Principle 5. Aesthetics and Recreation

Principle 6. Protection of Special Sites

Principle 10. Research

Principle 11. Training and Education

SFI Principle 3. Protection of Water Resources

Objective 3. Protection and Maintenance of Water Resources

- **Performance Measure 3.1.** Meet or exceed BMPs developed under Canadian or U.S. Environmental Protection Agency approved water quality programs.
 - **Indicator 1.** Program to implement state or provincial best management practices during all phases of management activities.



Aquatic species protection

SFI Principle 3. Protection of Water Resources

Objective 3.

- **Performance Measure 3.2.**
Riparian protection measures
 - **Indicator 4.** Identification and protection of non-forested wetlands, including bogs, fens and marshes, and vernal pools of ecological significance.

Protection of wetland
associates



SFI Principle 4: Protection of Biological Diversity

Objective 4. Conservation of Biological Diversity including Forests with Exceptional Conservation Value (FECV)

- **Performance Measure 4.1.** Programs to promote biological diversity at stand- and landscape-levels.
 - **Indicator 1.** Program to promote the conservation of native biological diversity
 - **Indicator 2.** Program to protect T&E
 - ➡ **Indicator 3.** Program to locate and protect known FECVs
 - **Indicator 4.** Program to retain stand-level wildlife habitat elements
 - ➡ **Indicator 5.** Program for assessment of forest cover types and habitats
 - **Indicator 6.** Support or participate in conservation of old-growth
 - **Indicator 7.** Participation in programs to prevent the spread of invasive exotics
 - **Indicator 8.** Program to incorporate fire where appropriate

SFI Principle 4: Protection of Biological Diversity

Objective 4.

- **Performance Measure 4.1**

- **Indicator 5** Program for assessment of forest cover type, age or size classes, and habitats (ownership and landscape scale) and take into account findings in planning and management activities.

SFI Principle 4: Protection of Biological Diversity

Objective 4.

- **Performance Measure 4.2.**
Apply knowledge gained through research to manage wildlife habitat and contribute to the conservation of biological diversity.
 - **Indicator 1.** Collection of info. on FECV through inventory process, mapping, or Nature Serve
 - **Indicator 2.** A methodology to incorporate research results into forest management decisions.

SFI Principle 4. Protection of Biological Diversity

Objective 6. Protection of Special Sites.

- **Performance Measure 6.1.** Identify special sites and manage them in a manner appropriate for their unique features.
 - **Indicator 1.** Use of information such as existing natural heritage data, expert advice or stakeholder consultation in identifying or selecting special sites for protection.
 - **Indicator 2.** Appropriate mapping, cataloging and management of identified special sites.

SFI Principle 5. Aesthetics and Recreation

Objective 5. Management of Visual Quality and Recreational Benefits.

- **Performance Measure 5.2.**
Size, shape and placement of clearcut harvests.
 - **Indicator 1.** Average size of clearcut not to exceed *120 acres
 - * Average CC opening size often much lower
- **Performance Measure 5.3.**
Green-up requirement
 - **Indicator 3.** Trees at least 3 years old or 5 feet high before adjacent areas are clearcut



Habitat Diversity

SFI Principle 10. Research

Objective 15 – Forestry Research, Science, and Technology

- **Performance Measure 15.1 Financial or in-kind support of forest research**
 - **Indicator 1.** Support of research addressing:
 - c. effectiveness of water quality and best management practices for protecting the quality, diversity and distributions of fish and wildlife habitats;
 - d. wildlife management at stand and landscape levels;
 - e. conservation of biological diversity;
 - f. ecological impacts of bioenergy feedstock removals on productivity, wildlife habitat, water quality and other ecosystem functions;

SFI Principle 11. Training and Education

Objective 16 – Training and Education

- **Performance Measure 16.2.**
 - **Indicator 1.** Support of wood producer training courses that address:
 - a) Awareness of sustainable forestry principles and SFI;
 - b) Best Management Practices (focus on SMZ & roads);
 - c) Reforestation, invasive exotics, forest resource conservation, aesthetics, and special sites;
 - d) U.S. Endangered Species Act and measures to protect wildlife habitat (e.g. Forests with Exceptional Conservation Value);



Objective 17 – Community Involvement in the Practice of Sustainable Forestry

- **Performance Measure 17.1**

- **Indicator 5.** Program participants are knowledgeable about credible **regional conservation planning and priority-setting efforts** that include a broad range of stakeholders and have a **program to take into account the results of these efforts in planning.**

State Wildlife Action Plan - An Overview

A Plan to Protect Wildlife Diversity



Do you enjoy hearing the melodies of songbirds, watching the antics of wildlife or photographing delicate wildflowers? As much as these natural resources enrich our lives aesthetically, they also are linked to us ecologically, socially and economically. Our quality of life is affected by how well we conserve wildlife and the places they call home.

Although Georgia is one of the most biologically diverse states in the nation, 318 species here have such low populations that state or federal laws protect them. Hundreds of other species are of conservation concern as well, mostly due to habitat degradation and destruction.

FSC

Principles An essential *rule or element* of forest stewardship



Criterion A *means of judging* whether or not a Principle (of forest stewardship) has been fulfilled.



Indicators *specific requirements* in the FSC-US forest management standard

FSC Principles Addressing Wildlife and Biodiversity

Principle 6. Environmental Impact

Principle 7. Management Plan

Principle 8. Monitoring and Assessment

Principle 9. Maintenance of High Conservation Value Forests

FSC Principle 6. Environmental Impact

- **Criterion 6.1** Assessment of environmental impacts appropriate to the scale of forest management
 - **Indicator 6.1.a** use of credible scientific analysis, best available information (including relevant databases), and local knowledge



- **Criterion 6.2** Safeguards shall exist which protect rare, threatened and endangered species and their habitats
 - **Indicator 6.2. a** If presence of RTE species is likely a field survey to verify presence is conducted or management occurs with the assumption that potential RTE species are present.

FSC Principle 6. Environmental Impact

- **Criterion 6.3** Ecological functions and values maintained intact, enhanced, or restored, including:
 - **Indicator 6.3.a.2** Management is modified if a rare ecological community is present



- **Indicator 6.3.c** Riparian Management Zones (RMZs) to provide:
 - a) habitat for aquatic species that breed in uplands;
 - b) habitat for terrestrial species that breed in aquatic habitats;
 - c) habitat for species using riparian areas for food, cover & travel;
 - d) habitat for plant species associated with riparian areas
 - e) stream shading and woody debris for aquatic ecosystem.



FSC Principle 7. Management Plan

- **Criterion 7.1** The management plan and supporting documents shall provide:
 - f) Safeguards based on environmental assessments.
 - g) Plans for the I.D. and protection of rare, T&E species
 - h) Maps including protected areas
 - **Indicator 7.1.d** Includes description of how landscape-scale habitat elements will be addressed.
 - **Indicator 7.1.e** Includes description of and protection for:
 - Rare species, T&E species, and natural communities
 - species and community diversity and wildlife habitats
 - water resources
 - High Conservation Value Forests

FSC Principle 8. Monitoring and Assessment

- **Criterion 8.2** monitor(c) changes in the flora and fauna, (d) Environmental impacts of harvesting
 - **Indicator 8.2.b** The forest owner or manager periodically obtains data needed to monitor presence of:
 1. Rare, T&E species and/or their habitats
 2. Common and rare plant communities and/or habitat;
 3. Location, presence and abundance of invasive species;
 4. Condition of protected areas, set-asides and buffer zones;
 5. High Conservation Value Forests (see Criterion 9.4).



FSC Principle 9. Maintenance of High Conservation Value Forests (HCVFs)



- **Criterion 9.1** Assessment presence of HCVS
 - **Indicator 9.1.a** I.D. and mapping of HCVFs to the extent of available data
 - **Indicator 9.1.b** Consultation with qualified specialists
 - **Indicator 9.3.b** Management to maintain or enhance the high conservation values and the extent of the HCVF.
- **Criterion 9.4** Monitor effectiveness of the measures employed to maintain or enhance HCVFs

The Influence of Corporate Certification Systems
on Non-Certified Lands:
Overview of
SFI Fiber Sourcing Objectives

SFI Fiber Sourcing

- Fiber Sourcing program promotes the practice of sustainable forestry on private lands directly through:
 - Objective 8 Landowner outreach
 - Objective 9 Use of Qualified Logging Professionals
 - Objective 10 Adherence to BMPs
- In addition Fiber Sourcing requires fiber purchaser to meet objectives 14 through 20
 - Objective 15 Research
 - Objective 16 Training and Education
 - Objective 17 Community Involvement in Sustainable Forestry

Objective 8. Landowner Outreach

- **Performance Measure 8.1**

- **Indicator 1.** Regionally appropriate information supplied to forest landowners on



The image shows three overlapping horizontal banners. The top banner is blue and features a forest scene with a glowing green tree icon. The middle banner is yellow and features a forest scene with a glowing green tree icon. The bottom banner is red and features a deer in a forest with a glowing green tree icon.

**Protect Water and Soil Quality:
Use Best Management Practices**

**Protect Biodiversity:
Understand Your Responsibilities**

Enhance Your Forest: Manage for Wildlife

Forest management is not simply a means to harvest valuable wood products. Forests provide diverse habitats required by a multitude of wildlife species. With careful planning and active management, you can manage your forest and harvest timber without sacrificing wildlife habitat, even in areas where forestry activities should be limited due to endangered or imperiled species or rare habitats.

What You Can Do

Here are some options for you to consider:

- **Use borders or edges of harvest**

(e.g., avoiding square blocks) create additional edge, while also reducing the visual impact of the harvest.

- **Diversify your forest to attract a greater abundance and diversity of wildlife.** Consider planning for a diverse forest by maintaining a mixture of tree species, both hardwood and pine, and different aged stands—from seedlings to mature trees. Conduct periodic thinnings to keep at least 30% of the ground in



vegetation recovering from recent disturbance, which serves as escape cover, brood areas, forage, nesting cover and many other benefits to wildlife. Maintain different stages of this early successional habitat by incorporating shrubby cover, fallow patches and annual disturbance to promote quality vegetation for wildlife. Manage for native forage by prescribed burning and winter disking, or by planting 30 to 50% of the openings on a one-to three-year rotation. Consider keeping 5 to 20% of the property in wildlife

Objective 9. Qualified Logging Professionals

- Performance Measure 9.1 – broaden the practice of sustainable forestry by encouraging utilization of professionals
 - Indicator 1. Program to use qualified loggers

Remember Objective 16 addresses training requirements relevant to wildlife and biodiversity:

- SFI principles
- Best Management Practices
- invasive exotics
- special sites
- U.S. Endangered Species Act
- measures to protect wildlife habitat and FECVs

Objective 10. Adherence to BMPs

- **Performance Measure 10.1.** *Program Participants* shall clearly define and implement *policies* to ensure that facility inventories and *fiber sourcing* activities do not compromise adherence to the *principles of sustainable forestry*.
 - **Indicator 1.** Program to purchase material from SFI trained loggers
 - **Indicator 3.** Contracts for the purchase of raw material include provisions requiring the use of *best management practices*.

