

**A Comparison of the
Louisiana Forest Stewardship Program**

and

**Four Nationally Recognized
Forest Certification Programs**

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Preface

Environmental certification of forest products and forestry practices has become an important issue facing the forest products industry. In response to social and environmental concerns, some environmental organizations, retailers and wood products companies are encouraging consumers to purchase wood originating from certified sustainable forests. These efforts are intended to counter an often-common perception by the general public that most forest practices involving the harvesting of wood do irreversible damage to the environment. The basis for certification is a perceived need for consumers to be assured by neutral third-party organizations that the forest industry is employing sound practices that will ensure a sustainable forest. Many groups have a stake in forest certification.

This study compares the Louisiana Forest Stewardship Program, a state-level program for the non-industrial private forestland owners, with four certification schemes. The schemes are: the American Forest and Paper Association's Sustainable Forestry Initiative, The Rainforest Alliance's SmartWood Program, Scientific Certification Systems' Forest Conservation Program, and The National Woodland Owners Association's Green Tag Forestry Program.

Acknowledgements

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Executive Summary

1. The Louisiana Forest Stewardship management plans analyzed in this study vary tremendously in content and quality. Most simply do not give enough information to evaluate them for certification relative to plans associated with properties that have been certified by these organizations.
2. Many certification criteria are not included in the Louisiana Forest Stewardship management plans. Accordingly, when the categories “Cannot Assess” or “Did Not Assess” are included in the analysis, on average, the fourteen Forest Stewardship Program management plans do not compare favorably to the certification schemes represented in the study.
3. Not including the categories “Cannot Assess” or “Did Not Assess”, average ratings for indices of criteria elements are as follows:
 - a. Informational Elements
 - SFI (AF&PA)-most acceptable
 - SmartWood-least acceptable
 - Overall mean across all certifiers was 2.9, or very close to Adequate.
 - a. Timber Management Elements
 - SFI (AF&PA)-most acceptable
 - SmartWood-least acceptable
 - Overall mean across all certifiers was 3.0, or Adequate.
 - c. Environmental Elements
 - SFI (AF&PA)-most acceptable
 - SCS-least acceptable
 - Overall mean across all certifiers was 2.9, or very close to Adequate.
1. Respondents were asked to give an overall impression of how these management plans compared to their respective organizational criteria and standards for certification. Overall, the plans compare adequately to SFI standards, between adequate and unfavorable for SCS and unfavorable for both SmartWood and Green Tag certification systems.
2. An analysis across all plans and all respondent certification entities indicates that 69% of the Louisiana Forest Stewardship Program management plans compare unfavourably to certification standards.

3. Respondents were asked to give an overall impression of the chances these management plans would have as they stand in receiving certification approval by the respective agencies. SCS and SFI are close to “Possible”, Green Tag is between “Likely” and “Possible”, and SmartWood is between “Possible” and “Unlikely.”
4. An analysis across all plans and all respondent certification entities indicates that 49% of the Louisiana Forest Stewardship Program management plans could possibly be certified when cast against certification entity standards. An additional 30% were deemed likely or highly likely to be certified while 21% were unlikely or highly unlikely to be certified.
5. There is the need for either mutual recognition by AF&PA of Stewardship or some other type of concession by them to reflect the needs of small owners reflected in the Forest Stewardship Program.
6. The structure of the Louisiana Forest Stewardship Management System appears to lend itself to the concept of FSC Group Certification. The system itself is certified under a manager and individual tracts of forest, ownership units, are certified under that management system.
7. On the basis of the plans submitted for review, we conclude that work is required to further develop and monitor implementation of a revised management plan framework if compliance with the certification schemes represented in the study is desired.
8. This study is a logical next step in understanding options available to Louisiana forestland owners. By comparing the Louisiana Forest Stewardship program with the major certification schemes, Louisiana forestry officials can either determine where the gaps exist between the Louisiana program or choose to position the Forest Stewardship program as a separate and unique certification approach.

I. PROBLEM STATEMENT AND JUSTIFICATION

Third-party certification of forest products and forestry practices has become an important issue in the forest products industry in the United States. Some home center retailers and wood products companies are encouraging consumers to purchase wood originating from certified sustainable forests. Certification is intended to assure consumers, by neutral third-party organizations, that the forest industry is employing sound management practices. This article examines certification in the context of non-industrial private forestland owners in Louisiana.

Two-thirds of the nation's forests are classified as timberland (490 million acres) (Birch 1996). Of this, 358 million acres are in private ownership both industrial and non-industrial. Non-Industrial Private Forestland (NIPF) owners are defined as private forest owners who do not own or operate wood processing facilities, and include farmers, miscellaneous individuals and non-forest industry corporations, such as banks, insurance companies and the like (Bliss et al. 1997). According to Powell et al. (1994), private individuals or groups own 59 percent of our nation's timberland. While NIPF owners own from one to thousands of acres of forest, in the southern United States, nearly two-thirds own fewer than 10 acres (Birch 1996).

In a study of Louisiana non-industrial private forest land owners conducted by Vlosky and Granskog (2001) respondents were asked if they had suggestions as to what might be viable alternatives to third-party certification of non-industrial private forestlands. The highest ranked recommendation was to have the Louisiana Department of Agriculture and Forestry (LDAF) be the certifying agency. Respondents felt that adherence to state guidelines, primarily through the Louisiana Forest Stewardship Program is sufficient and that monitoring by the LDAF would be useful.

The 1990 Farm Bill authorized the Forest Stewardship Program. As part of the first farm bill to specifically have a section devoted exclusively to forestry, the Cooperative Forestry Assistance Act was originally intended to update, expand, and eventually replace the Forestry Incentives Program (FIP), which provides cost-share dollars to assist landowners with tree planting. While FIP has been a successful program, its sole focus was timber management. In contrast, the Stewardship Program promotes multiple resource management for participation NIPF landowners to implement plans written by professional land managers for timber and non-timber attributes such as water quality, wildlife, soil protection, recreation, and aesthetics.

The USDA Forest Service administers the Stewardship Program and implements it via cooperative agreements with each State Forestry office. Individual states have the flexibility to develop specific program guidelines and to involve state and local resource agencies and land-grant universities with program implementation. This flexibility also means that many state and federal resource management agencies

may be involved in the Stewardship Program depending upon the way individual states interpret the legislation.

As authorized, The Cooperative Forestry Assistance Act has many parts, including a section to authorize the Forest Stewardship Program and the Stewardship Incentives Program. The Forest Stewardship Program makes it possible for professional resource management specialists from state and federal bureaus to provide on-site technical assistance for landowners that wish to participate in the Stewardship Program. From 1990 to 1999, the Stewardship Incentives Program (SIP) provided cost-share funding to assist landowners with the costs of drafting and implementing their Stewardship management plans. All NIPF landowners that were willing to meet the requirements of the Act were eligible for this assistance. Cost-share assistance has not been available under SIP since 1999, although landowners can still participate in the Stewardship Program in other ways.

This study is a logical next step in understanding options available to Louisiana forestland owners. By comparing the Louisiana Forest Stewardship program with the major certification schemes, Louisiana forestry officials can either determine where the gaps exist between the Louisiana program or choose to position the Forest Stewardship program as a separate and unique certification approach.

II. Study Results

Results are presented in three sections:

1. Certifier evaluation *for each element* for all plans combined
2. Overall comparison to certifiers standards *for each plan*
3. Independent review of the management plans

Table 1 indicates the individual elements evaluated in the study.

Table 1. Certification Management Plan Elements Evaluated

Information Elements

• General Information
• Forest Security
• Management Plans
• Management History
• Harvest Levels

Timber Management Elements

• Sustained Yield Mgmt.
• Annual Harvest Plans
• Harvesting Guidelines
• Felling Guidelines
• Clearcutting Guidelines
• Road Guidelines
• Skidding Guidelines
• Post-harvest Assessment
• Reforestation Guidelines
• Water Quality
• Chemical Guidelines
• Fire/Insects Disease

Table 1 (continued). Certification Management Plan Elements Evaluated

Environmental Elements

• Long-term Productivity
• Non-Timber Products
• Basal Area Retention
• Rotation-age Guidelines
• Fragmentation Guidelines
• Biological Resources
• T & E Species Protection
• Biological Diversity
• Wildlife and Fisheries
• Species Conversions
• Soil Conservation
• Protected Zones

Certifier evaluation *for each element* for all plans combined

Certifiers were asked to rank the adequacy of Louisiana Department of Agriculture and Forestry Forest Stewardship Program plans relative to the criteria their certification agency uses.

The results contained in this section are derived from average scores using a 5-point Likert-type scale. The options of “did not assess” and “could not assess” were omitted from the reported data. For **Figures 1-8**, the lower the mean number, the higher degree of favorability.

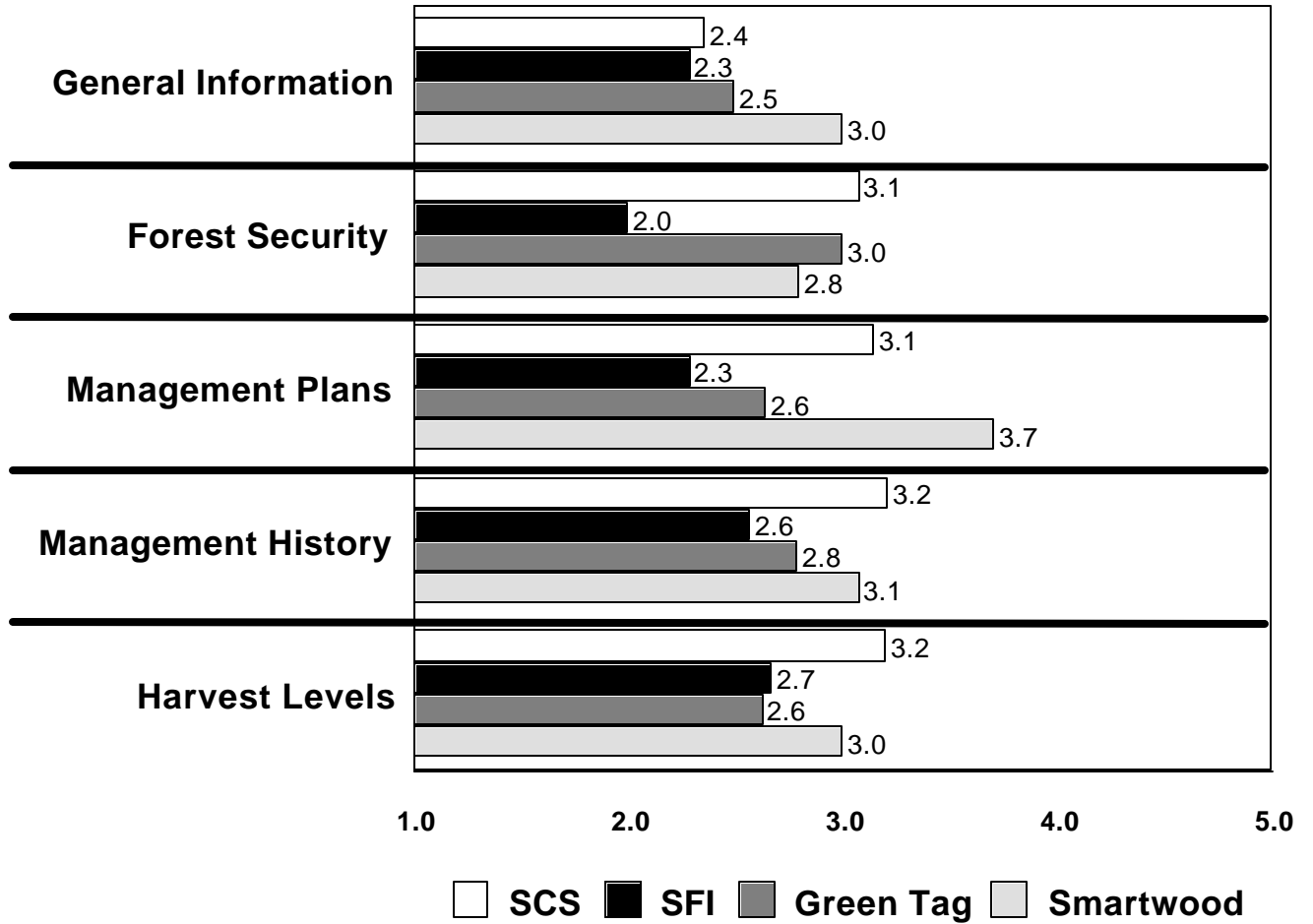
Figure 1 shows respondent evaluations for the Informational Elements found in certification criteria. Aside from the SmartWood rating of 3.7 for Management Plans, the range of responses is very narrow, between 2.0 and 3.2 indicating a favourable to adequate perception for these elements.

On average for an index of Informational Elements (**Figure 4**), SFI (AF&PA) rated a 2.4 on the high end of the scale vs. SmartWood at 3.3. The overall mean for Informational Elements across all certifiers was 2.9, or very close to Adequate.

Figure 1.

All Plans Combined Informational Elements

Scale: 1=Highly Favorable; 2=Favorable; 3=Adequate; 4= Unfavorable; 5= Highly Unfavorable



Timber Management element evaluation resulted in a wider spread of average scores between certification entities (**Figures 2a and 2b**). There is no clear pattern between elements. As none of the plans contained felling guidelines, none of the respondents said could assess that particular category, even though that is an attribute some want to see addressed in plans for the forests they certify.

On average for an index of Timber Management Elements (**Figure 4**), SFI (AF&PA) rated a 2.5 on the high end of the scale vs. SmartWood at 3.3. The overall mean for Timber Management Elements across all certifiers was 3.0, or Adequate.

Figure 2a.

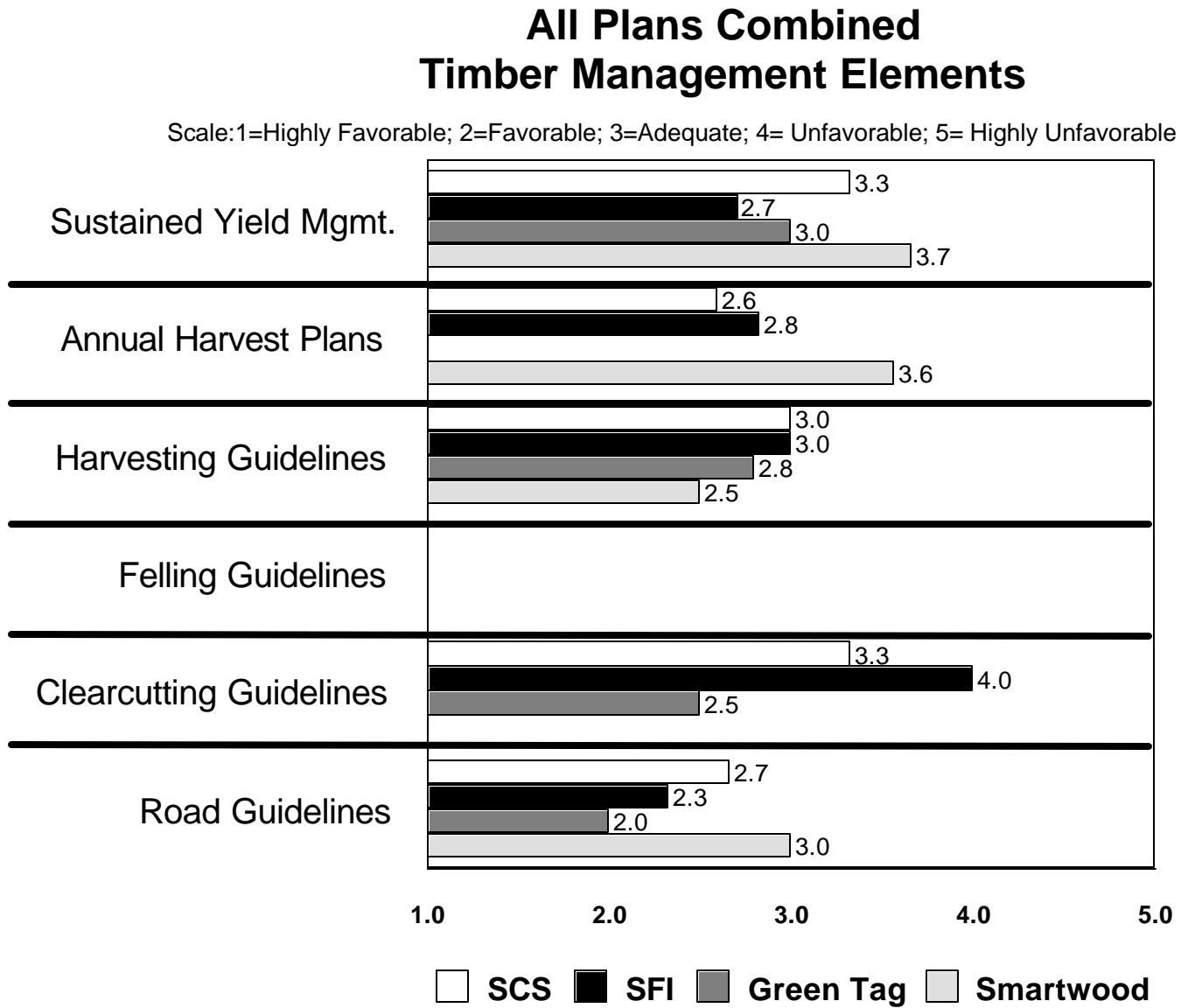
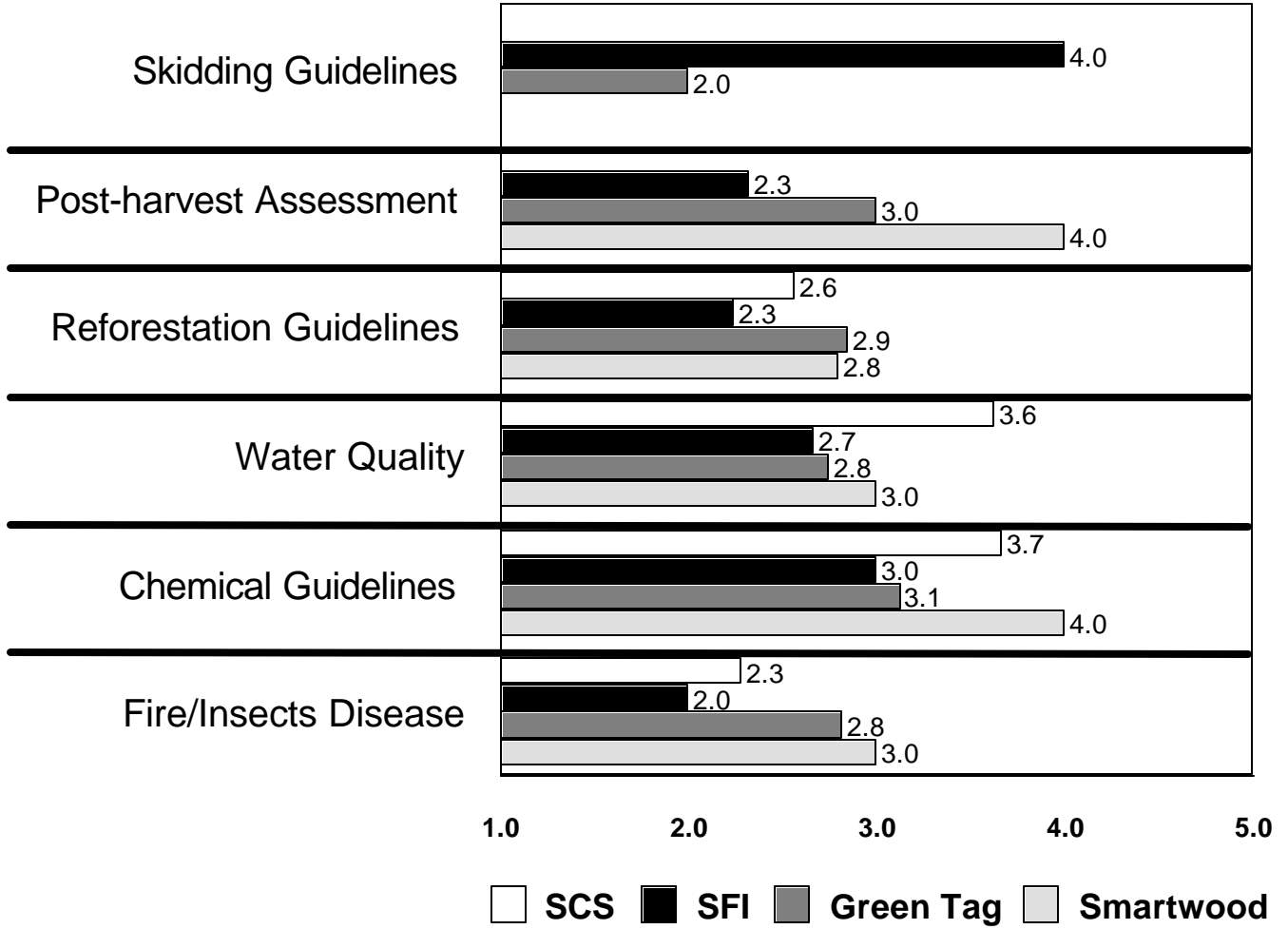


Figure 2b.

All Plans Combined Timber Management Elements

Scale: 1=Highly Favorable; 2=Favorable; 3=Adequate; 4= Unfavorable; 5= Highly Unfavorable



The range for Environmental Elements was from a low of 1.0 (highly favorable) for Threatened and Endangered Species Protection by SFI/AFPA to a 4.0 (Unfavorable) for Rotation Age Guidelines by SCS.

On average for an index of Environmental Elements (**Figure 4**), SFI (AF&PA) rated a 2.6 on the high end of the scale vs. SCS at 3.1. The overall mean for Environmental Elements across all certifiers was 2.9, or very close to Adequate.

Figure 3a.

All Plans Combined Environmental Elements

Scale: 1=Highly Favorable; 2=Favorable; 3=Adequate; 4= Unfavorable; 5= Highly Unfavorable

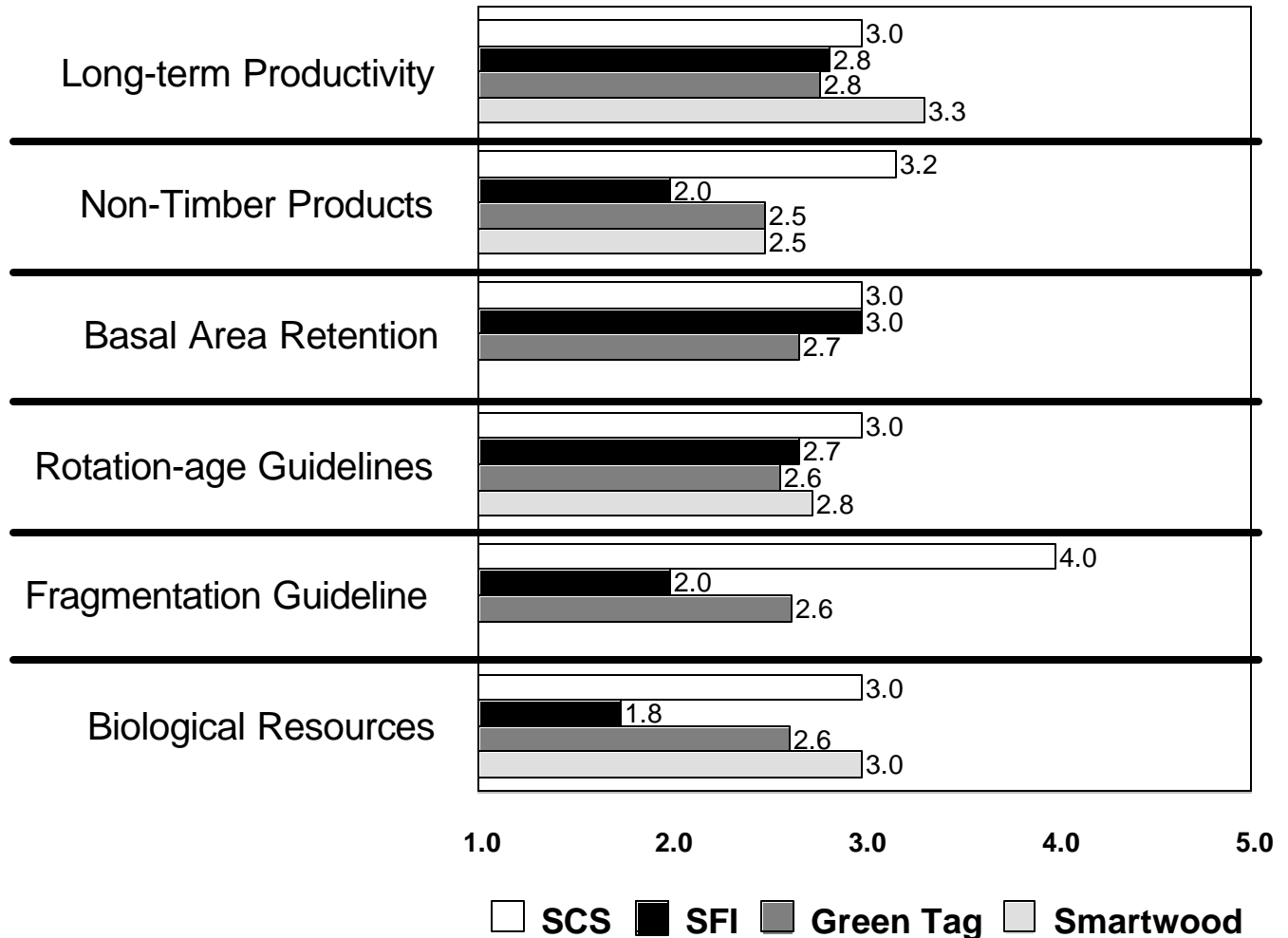


Figure 3b.

All Plans Combined Environmental Elements

Scale: 1=Highly Favorable; 2=Favorable; 3=Adequate; 4= Unfavorable; 5= Highly Unfavorable

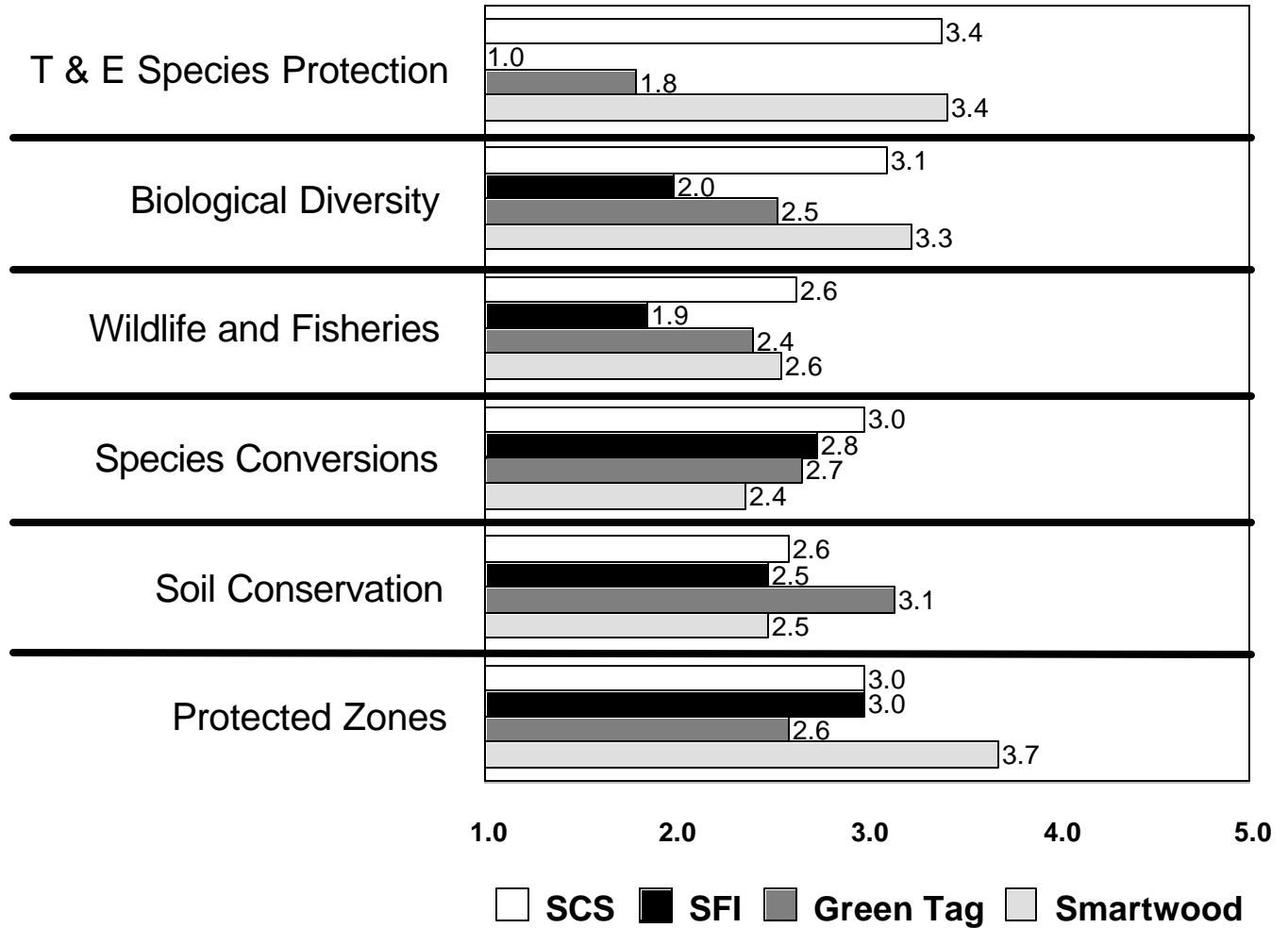
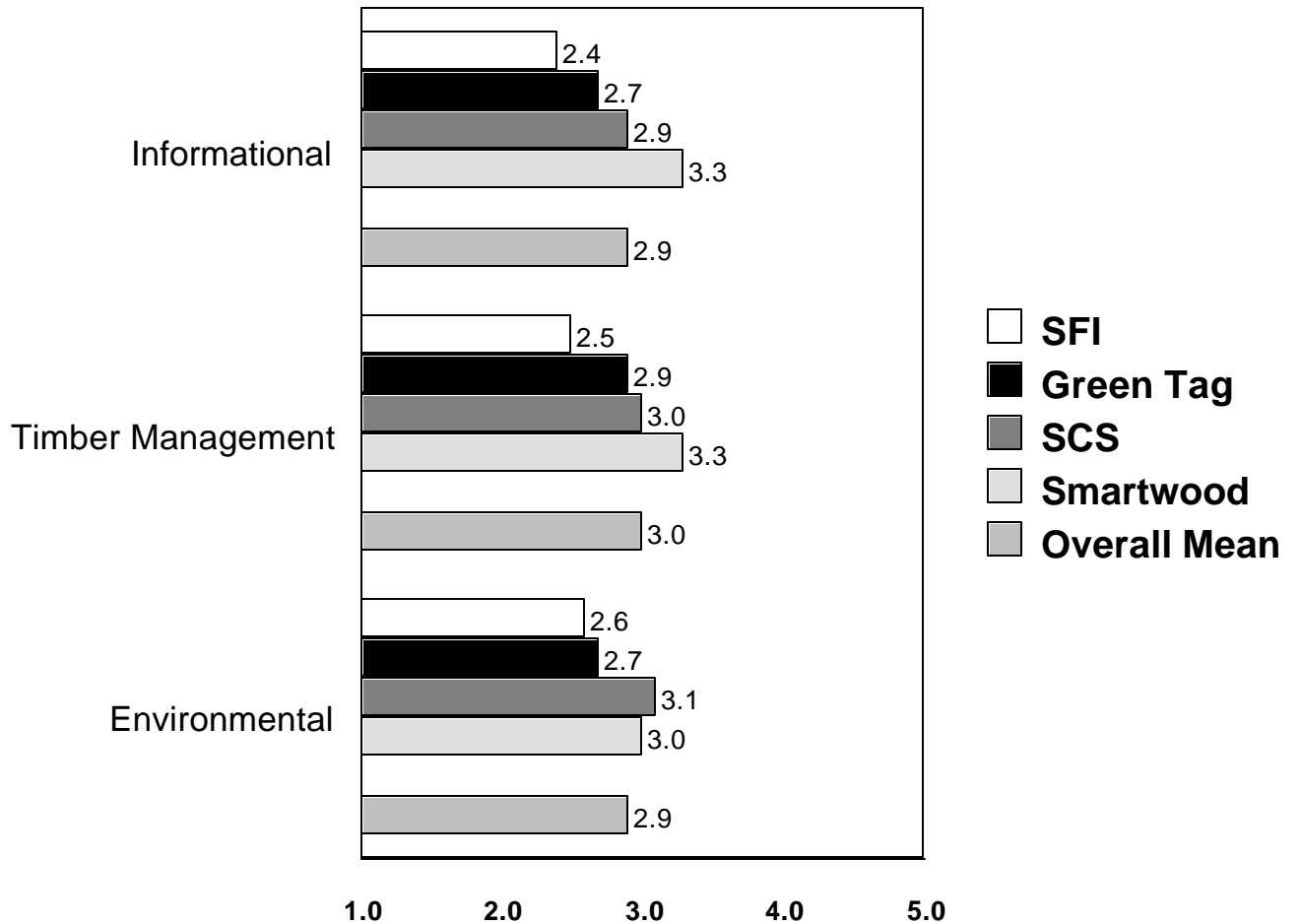


Figure 4.

All Plans Combined Element Means By Organization

Scale: 1=Highly Favorable; 2=Favorable; 3=Adequate; 4= Unfavorable; 5= Highly Unfavorable



Respondents were asked to give an overall impression of how these management plans compared to their respective organizational criteria and standards for certification. As seen in **Figure 5**, plans compare adequately to SFI standards, between adequate and unfavorable for SCS and unfavorable for both SmartWood and Green Tag certification systems.

Figure 5.

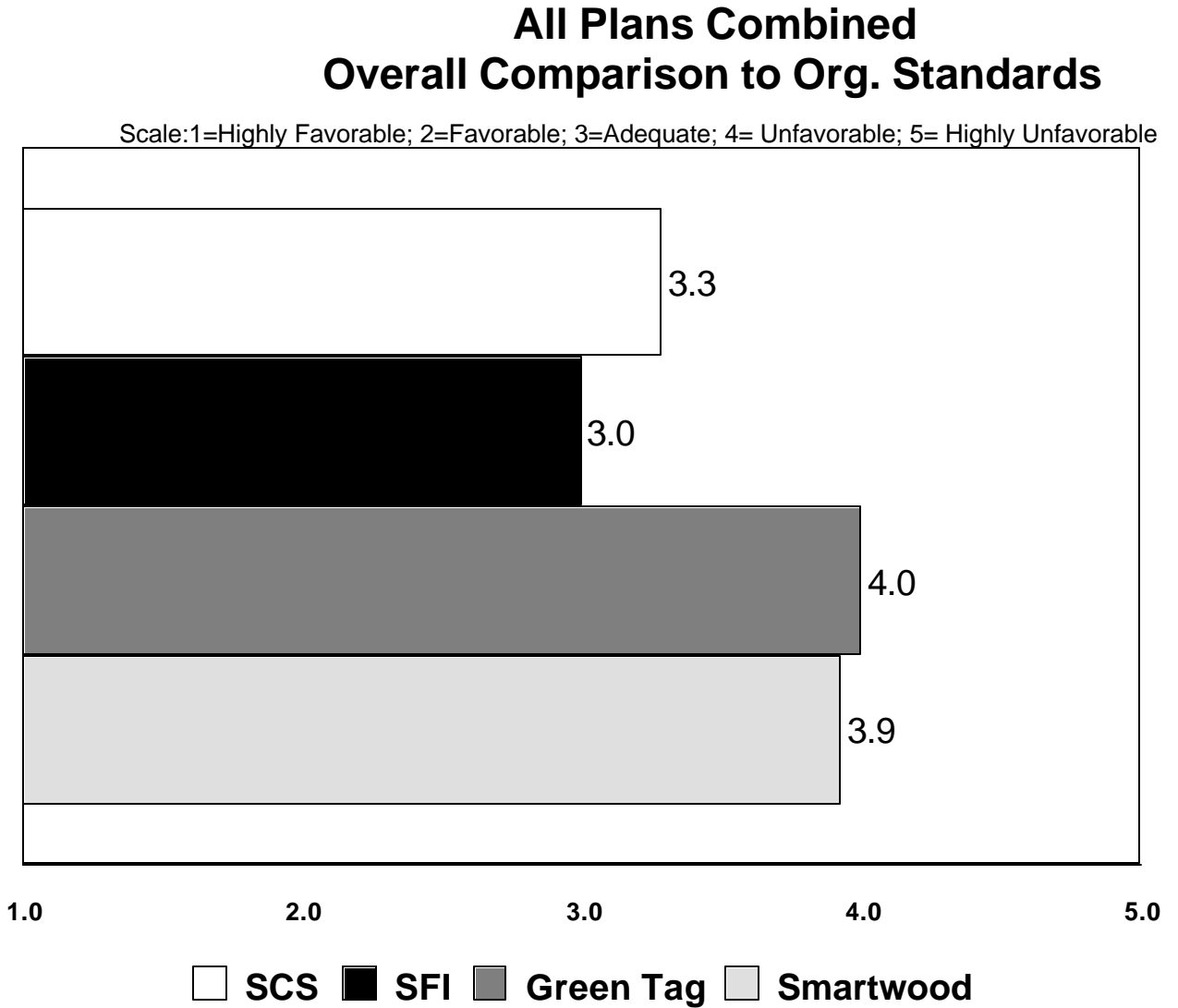


Table 2. Reasons Why Forest Stewardship Management Plans Do Not Compare Well to Certification Agency Standards

<ul style="list-style-type: none"> • STREAMS ARE NOT MAPPED. BUFFERS HAVE NOT BEEN ESTABLISHED.
<ul style="list-style-type: none"> • USE SITE SPECIFIC INFORMATION. ADDRESS SUSTAINED YIELD/ROTATIONS. BIOLOGICAL CONSIDERATIONS AND PROTECTION MEASURES ARE MISSING. HISTORY, SOCIAL & PHYSICAL, WILL HELP PROVIDE MANAGEMENT DIRECTION(S).
<ul style="list-style-type: none"> • NEEDS TO BE FILLED OUT WITH MORE SITE SPECIFIC INFO. BASIC BIOLOGICAL/NON-TIMBER DATA SHOULD BE PART OF THE PLAN. NEED INFO NOTED "CANNOT ASSESS".
<ul style="list-style-type: none"> • NEED NON-TIMBER INFO SUCH AS STREAMS, (TYPE, VALUE, PROTECTION), TIMBER INFO SUCH AS SPECIFIC THINNING PRESCRIPTIONS, BIOLOGICAL INVENTORY SUCH AS GENERAL WILDLIFE SPECIES TO MEET OWNERS OBJECTIVE. NEED INFO NOTED AS MISSING IN "CANNOT ASSESS".
<ul style="list-style-type: none"> • THE FORMAT OF THE PLAN IS DIFFICULT TO FOLLOW. GOOD INFO IS HIDDEN IN SECTIONS THAT FOCUS ON OTHER ISSUES. TIMBER ELEMENTS ARE LIMITED. NEED INFO NOTED IN "CANNOT ASSESS".
<ul style="list-style-type: none"> • ADDRESS THE AREAS THAT "CANNOT BE ASSESSED" AS PER THE CHECKLIST. THE PLAN IS SIMPLE AS USEFUL TO THE LANDOWNER OF 16 ACRES.
<ul style="list-style-type: none"> • THIS IS NOT A MANAGEMENT PLAN. 360 ACRES NEEDS AT A MINIMUM, A BUSINESS PLAN. THERE IS NO FORMAT OR MAPPING INFO THAT A BUSINESS PERSON COULD FOLLOW. INVENTORIES, PROTECTION MEASURES AND LONG-TERM DIRECTIONS ARE MISSING.
<ul style="list-style-type: none"> • NO DESCRIPTIONS ON TIMBER & NON-TIMBER SPECIES OR THEIR MANAGEMENT. DOES NOT ADDRESS OBJECTIVES CLEARLY. ADDRESS THE VALUE OF THE STREAM & ITS PROTECTION. FILL IN "CANNOT ASSESS" CONCERNS.
<ul style="list-style-type: none"> • INSUFFICIENT INFO. SITE INFORMATION WAS TAKEN BUT NOT INTERPRETED OR DESCRIBED IN PLAN. NEED TO COMPLETE AREAS DESCRIBED AS "CANNOT ASSESS".
<ul style="list-style-type: none"> • PUT MGT. INFO INTO A MANAGEMENT PLAN FORMAT. INFORMATION IS ON THE MAP, BUT NOT INTERPRETED OR WITH LEGENDS TO ASSIST INTERPRETATION. TOO MUCH INFORMATION IS MISSING (I.E. SUBJECTS ON THE "CANNOT ASSESS" SECTION.
<ul style="list-style-type: none"> • SHOULD COMPLETE THE MANAGEMENT PLAN BY ADDRESSING NON-TIMBER ISSUES.
<ul style="list-style-type: none"> • ADDRESS WATER QUALITY ISSUES, INCLUDE ECONOMIC INFORMATION IN MGT. PLAN. INCLUDE "CANNOT ASSESS" INFORMATION TO FLUSH OUT PLAN.

<ul style="list-style-type: none"> • A CONCERN IS THE CONVERSION OF NATURAL FORESTS & WETLANDS TO A POND/LAKE. MORE INFO WOULD BE NECESSARY ABOUT THE GAINED (& LOST) RESOURCES IN THE PLAN. OTHER MANAGEMENT CONCERNS SUCH AS THOSE NOTED AS "CANNOT ASSESS" WILL HAVE A FAVORABLE/UNFAVORABLE R
<ul style="list-style-type: none"> • 4.1.5.1.3 - PROGRAM PARTICIPANTS SHALL ADOPT A GREEN UP REQUIREMENT, UNDER WHICH PAST CLEARCUT HARVEST AREAS MUST HAVE TREES AT LEAST 3 YEARS OLD OR 5 FEET HIGH AT THE DESIRED LEVEL OF STOCKING BEFORE ADJACENT AREAS MAY BE CLEARCUT.
<ul style="list-style-type: none"> • MORE DETAIL NEEDS TO BE GIVEN AS FAR AS GUIDELINES FOR MANAGEMENT. SHOULD INCLUDE GUIDELINES FOR HARVESTING, ROAD CONSTRUCTION, BMPs, ETC. IF NOT LISTED DIRECTLY IN PLAN, IT SHOULD AT LEAST BE REFERENCED (I.E. SEE LA BMPs.
<ul style="list-style-type: none"> • RECORD KEEPING & TRACKING SYSTEM NEEDED, NEED TO INCLUDE ROAD, SKID, LANDING GUIDELINES + MAP, NEED YIELD PRODUCTIVITY & FINANCIAL PROJECTIONS (HARVEST LEVEL), SOIL/WATER CONSERVATION PLAN?, MORE DETAILED HARVEST PLAN INCLUDING FELLING & OTHER GUIDELINES
<ul style="list-style-type: none"> • TEN YEAR PLAN NEEDED; INCORPORATE DETAILED HISTORY OF OWNERSHIP + USE, FINANCIAL PROJECTIONS & HARVEST PLAN NEEDED INCL. GUIDELINES, CHEMICAL GUIDELINES NEEDED, WILDLIFE? T & Es? ON PROPERTY, CONSERVATION PLAN NEEDED, COMMUNITY RELATIONS NEEDED, PRESCRI
<ul style="list-style-type: none"> • YIELD PRODUCTIVITY & HARVEST PLAN/ASSESSMENTS NEEDED INCL. GUIDELINES, SOIL CONSERVATION PLAN NEEDED, RECORD KEEPING & TRACKING SYSTEM NEEDED, COMMUNITY RELATIONS NEEDED.
<ul style="list-style-type: none"> • YIELD PRODUCTIVITY & FINANCIAL PROJECTIONS NEEDED, HARVEST & MANAGEMENT PLAN ASSESSMENTS NEEDED INCL. GUIDELINES, BURN GUIDELINES NEEDED (WHO, HOW, WHEN), SOIL/WATER CONSERVATION PLAN NEEDED, INVENTORY OF PLANTS, ANIMALS, RECORD KEEPING/TRACKING SYSTEM,
<ul style="list-style-type: none"> • HARVEST PLAN, ASSESSMENTS NEEDED INCLUDING GUIDELINES, YIELDS, FINANCIAL PROJECTIONS, SOIL CONSERVATION PLAN NEEDED, CHEMICAL GUIDELINES NEEDED, RECORD KEEPING/TRACKING SYSTEM NEEDED, COMMUNITY RELATIONS NEEDED.

<ul style="list-style-type: none"> • HARVEST PLAN/ASSESSMENT NEEDED INCL. GUIDELINES, MANAGEMENT PLAN EVAL. & ASSESSMENTS, ANIMAL/PLANT INVENTORY INCL. T & E IF ANY, COMMUNITY RELATIONS NEEDED, RECORD KEEPING/TRACKING SYSTEM NEEDED, CONSERVATION PLAN NEEDED.
<ul style="list-style-type: none"> • DETAIL HISTORY OF MANAGEMENT, USE, OWNERSHIP, HARVEST PLAN & ASSESSMENTS INCL. GUIDELINES, FINANCIAL PROJECT., SOIL/WATER CONSERVATION PLAN, COMMUNITY RELATIONS, RECORD KEEPING/TRACKING SYSTEM, PLAN EVALUATION & ASSESSMENTS, PLANT/ANIMAL INVENTORY.
<ul style="list-style-type: none"> • FINANCIAL/YIELD PROJECTIONS, HARVEST PLAN & ASSESSMENT, RECORD KEEPING/TRACKING SYSTEM, COMMUNITY RELATIONS.
<ul style="list-style-type: none"> • BACKGROUND/HISTORY OF MGT., USE, OWNERSHIP, SOIL/WATER CONSERVATION PLAN, ANIMAL/PLANT INVENTORY, HARVEST PLAN/ASSESSMENT & GUIDELINES, FINANCIAL PROJECTIONS, PLAN REVIEW/EVAL., RECORD KEEPING/TRACKING, COMMUNITY RELATIONS.
<ul style="list-style-type: none"> • MORE DETAILED DESCRIPTION OF OBJECTIVES/RECOMMENDATIONS, HARVEST PLAN/ASSESSMENTS INCL. GUIDELINES & FINANCIAL PROJECTIONS, CONSERV. PLAN, RECORD KEEPING/TRACKING SYSTEM, COMMUNITY RELATIONS.
<ul style="list-style-type: none"> • ANIMAL/PLANT INVENTORY, BACKGROUND/HISTORY OF MGT., USE, OWNERSHIP, HERBICIDE GUIDELINES, TIMBER PLAN & ASSESSMENTS INCL. GUIDELINES & FINANCIAL PROJECTIONS, CONSERV. PLAN, RECORD KEEPING/TRACKING SYS., COMMUNITY RELATIONS.
<ul style="list-style-type: none"> • DETAILED HARVEST PLAN, FINANCIAL PROJECTIONS/YIELDS, PLAN REVIEW/EVAL., T & E SPECIES?, RECORD KEEPING & TRACKING SYS., COMMUNITY RELATIONS.
<ul style="list-style-type: none"> • ANNUAL HARVEST PLAN/ASSESSMENTS INCL. FINANCIAL ANALYSIS, RECORD KEEPING/TRACKING SYSTEM, SOIL/WATER CONSERVATION PLAN?
<ul style="list-style-type: none"> • CHEMICAL GUIDELINES, FINANCIAL ANALYSIS INCL. PROJECTIONS, ANNUAL HARVEST PLAN & ASSESSMENT INCL. GUIDELINES, RECORD KEEPING/TRACKING SYS., SOIL/WATER CONSV. PLAN.
<ul style="list-style-type: none"> • MORE DETAIL ON LONG-TERM MANAGEMENT, SUSTAINABILITY & HARVESTING PRACTICES.
<ul style="list-style-type: none"> • NEED A MUCH MORE DETAILED MANAGEMENT PLAN THAT ADDRESSES SUCH THINGS AS SUSTAINABILITY, ALLOWABLE CUT, THE SPECIES.
<ul style="list-style-type: none"> • NEED MUCH MORE DETAIL ON REGULATION, HARVESTS, CHEMICALS, AND ENVIRONMENTAL CONSIDERATIONS.

<ul style="list-style-type: none"> • SIMPLY NOT ENOUGH INFORMATION ALLOWABLE CUTS, HARVEST METHODS, SILVICULTURAL TECHNIQUES, & ENVIRONMENTAL ELEMENTS.
<ul style="list-style-type: none"> • NOT ENOUGH INFORMATION TO REALLY EVALUATE PLAN FOR FSC PRINCIPLES & CRITERIA. PLAN WOULD HAVE TO BE RE-WRITTEN WITH A LOT MORE DETAIL.
<ul style="list-style-type: none"> • MORE INFORMATION TO SHOW THAT FSC PRINCIPLES & CRITERIA ARE BEING ADDRESSED.
<ul style="list-style-type: none"> • SIMPLY NOT ENOUGH INFORMATION IN PLAN TO ASSESS COMPLIANCE WITH FSC PRINCIPLES & CRITERIA. NO INDICATION OF ATTEMPT AT SUSTAINED YIELD.
<ul style="list-style-type: none"> • NOT ENOUGH DETAIL TO EVALUATE RELATIONSHIPS TO FSC PRINCIPLES & CRITERIA.
<ul style="list-style-type: none"> • NEED MUCH MORE DETAIL TO EVALUATE - NEED INFORMATION THAT SPECIFICALLY ADDRESSES FSC PRINCIPLES & CRITERIA.
<ul style="list-style-type: none"> • MOST OF ISSUES TO BE ADDRESSED FOR FSC CERTIFICATION SIMPLY WERE NOT ADDRESSED. MANY OF ITEMS CHECKED "CAN NOT ASSESS" COULD BE CHECKED "HIGHLY UNFAVORABLE" SINCE IT APPEARS THEY ARE NOT BEING DONE.
<ul style="list-style-type: none"> • SIMPLY DOES NOT GIVE ENOUGH INFORMATION TO EVALUATE COMPLIANCE WITH FSC PRINCIPLES & CRITERIA.

Finally, respondents were asked to give an overall impression of the chances these management plans would have as they stand in receiving certification approval by the respective agencies (**Figure 6**). SCS and SFI are close to “Possible”, Green Tag is between “Likely” and “Possible”, and SmartWood is between “Possible” and “Unlikely.”

Figure 6.

All Plans Combined Chances of Receiving Cert. Recognition

Scale: 1=Highly Likely; 2=Likely; 3=Possible; 4= Unlikely; 5= Highly Unlikely

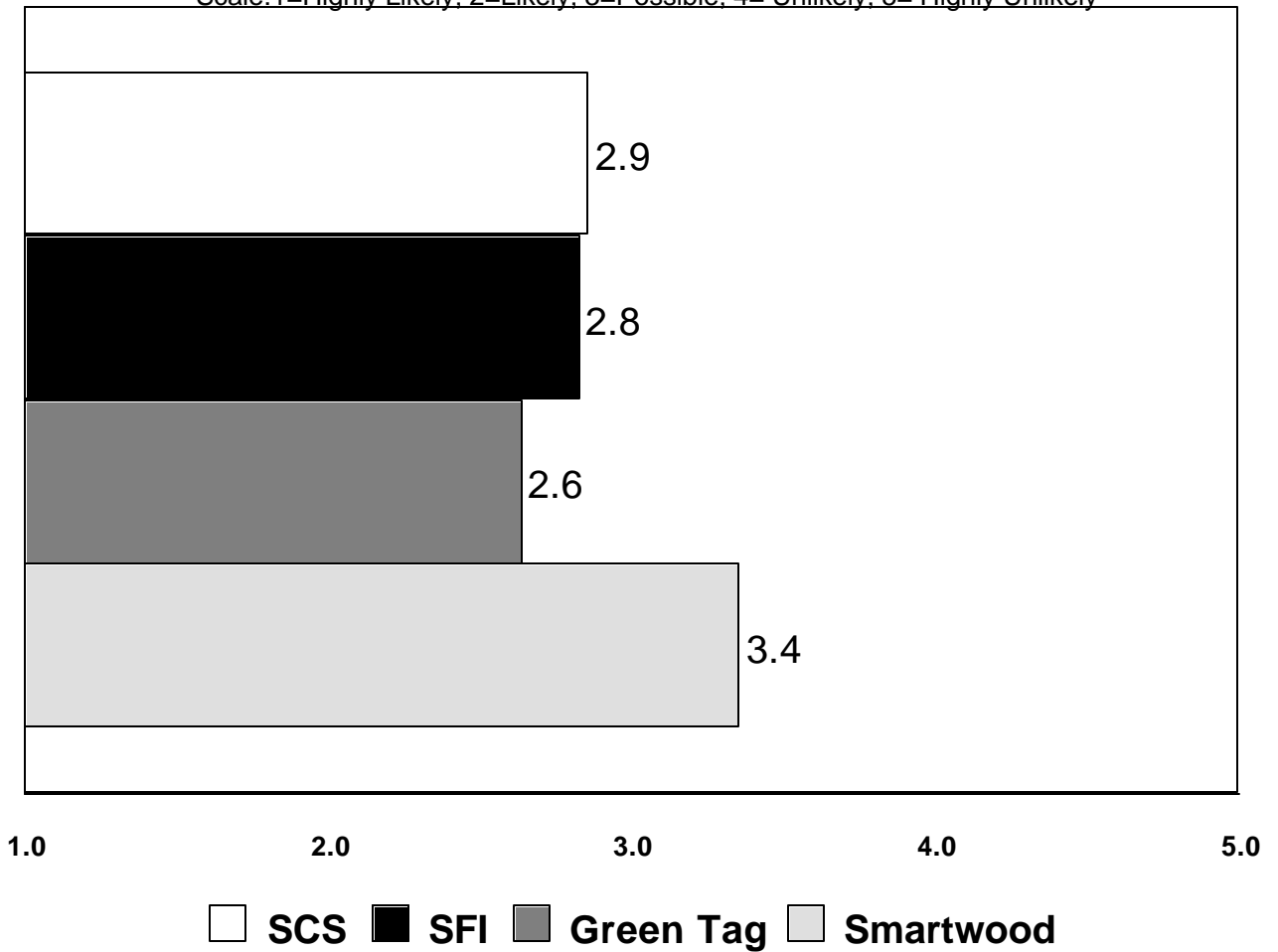


Table 3. Comments on Chances of Receiving Certification from Respondent Agencies

<ul style="list-style-type: none"> • LANDOWNER HAS HAD GOOD ADVICE IN THE PAST, HAS A PERFORMANCE.
<ul style="list-style-type: none"> • TOO BRIEF.
<ul style="list-style-type: none"> • ONE PAGE DESCRIPTION/MGT. PLAN IS NOT ENOUGH FOR 236 ACRES.
<ul style="list-style-type: none"> • GOOD MAPS, NEED MORE.
<ul style="list-style-type: none"> • SIMPLE BUT MEETS THE DEFINITION OF A MGT. PLAN.
<ul style="list-style-type: none"> • MAP NEEDS A LEGEND.
<ul style="list-style-type: none"> • THIS PLAN SEEMED TO BE WRITTEN FOR SOMEONE BESIDES THE LANDOWNER.
<ul style="list-style-type: none"> • KEY ELEMENTS OF A GOOD MANAGEMENT PLAN ARE NOT INCLUDED. IF THEY COULD BE INCLUDED (PLAN REVISION) THE PROPERTY MIGHT BE CERTIFIED.
<ul style="list-style-type: none"> • INFO GIVEN FOR ONLY 80 ACRES - NOT 630.
<ul style="list-style-type: none"> • IF HE IS DOING NOTHING MORE THAN STATED IN THE PLAN, IT IS UNLIKELY HE WOULD BE CERTIFIED.
<ul style="list-style-type: none"> • POSSIBLE - BUT WITH A LOT OF CONDITIONS REQUIRING MORE INFORMATION IN THE PLAN.
<ul style="list-style-type: none"> • IT WOULD NOT PASS WITH ONLY CURRENT INFORMATION, BUT IT APPEARS THAT CONDITIONS COULD BE ESTABLISHED & IF MET, IT WOULD LIKELY BE CERTIFIED.
<ul style="list-style-type: none"> • PLAN WOULD NEED TO BE REVISED & MANY OTHER ISSUES ADDRESSED.
<ul style="list-style-type: none"> • PLAN ITSELF IS NOT ACCEPTABLE.
<ul style="list-style-type: none"> • POSSIBLE, BUT IT WOULD DEPEND ON WHAT IS ACTUALLY BEING DONE ON THE GROUND & WHAT IS PLANNED.
<ul style="list-style-type: none"> • THE PLAN DOES NOT ADDRESS MANY OF THE THINGS NECESSARY FOR FSC CERTIFICATION, BUT IT IS QUITE POSSIBLE THE OWNERS COULD MEET THOSE REQUIREMENTS.

In order to identify which elements were omitted from the selected management plans, **Figures 7-35** includes the responses “Cannot Assess” and “Did Not Assess”. Each element is charted for each certification entity. **Table 4** contains a generalized interpretation of the level of acceptance for each element.

Table 4. Generalized Interpretation of the Level of Acceptance for each Study Certification Element

Information Elements

General Information...	...	favorable to adequate
Forest Security...	...	cannot assess
Management Plans	...	adequate
Management History...	...	normally distributed from highly favorable to highly to highly unfavorable; midpoint of adequate
Harvest Levels	...	bimodal; adequate and cannot assess

Timber Management Elements

Sustained Yield Mgmt.	...	bimodal; adequate and cannot assess
Annual Harvest Plans	...	no clear pattern
Harvesting Guidelines	...	cannot assess
Felling Guidelines	...	cannot assess
Clearcutting Guidelines	...	cannot assess
Road Guidelines	...	cannot assess
Skidding Guidelines	...	cannot assess
Post-harvest Assessment	...	cannot assess
Reforestation Guidelines	...	favorable to adequate
Water Quality	...	adequate
Chemical Guidelines	...	cannot assess
Fire/Insects Disease	...	split between favourable, adequate, and cannot assess

Table 4 (continued). Generalized Interpretation of the Level of Acceptance for each Study Certification Element

Environmental Elements

Long-term Productivity	...	bimodal; adequate and cannot assess
Non-Timber Products	...	bimodal; adequate and cannot assess
Basal Area Retention	...	bimodal; adequate and cannot assess
Rotation-age Guidelines	...	cannot assess
Fragmentation Guidelines	...	cannot assess
Biological Resources...	...	cannot assess (except for Green Tag-adequate)
T & E Species Protection	...	cannot assess
Biological Diversity	...	no pattern
Wildlife and Fisheries	...	adequate
Species Conversions	...	bimodal; adequate and cannot assess
Soil Conservation	...	no pattern
Protected Zones	...	no pattern

Figure 7.

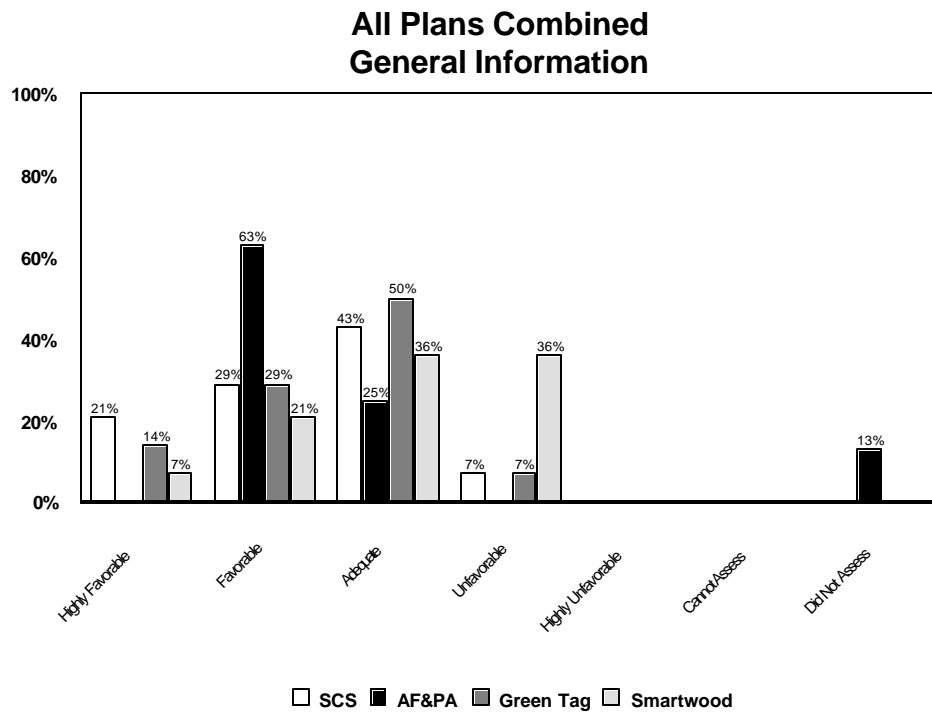


Figure 8.

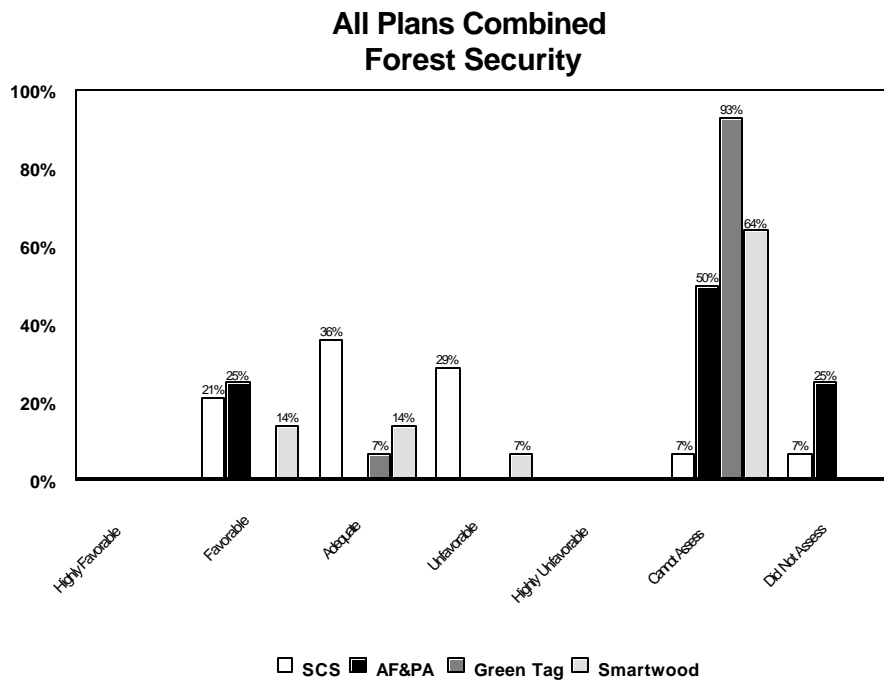


Figure 9.

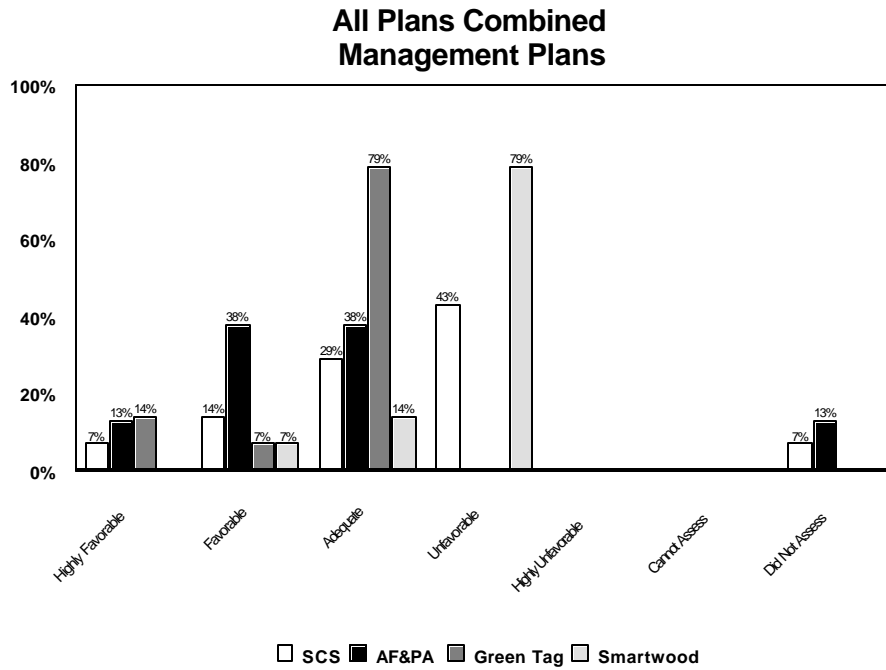


Figure 10.

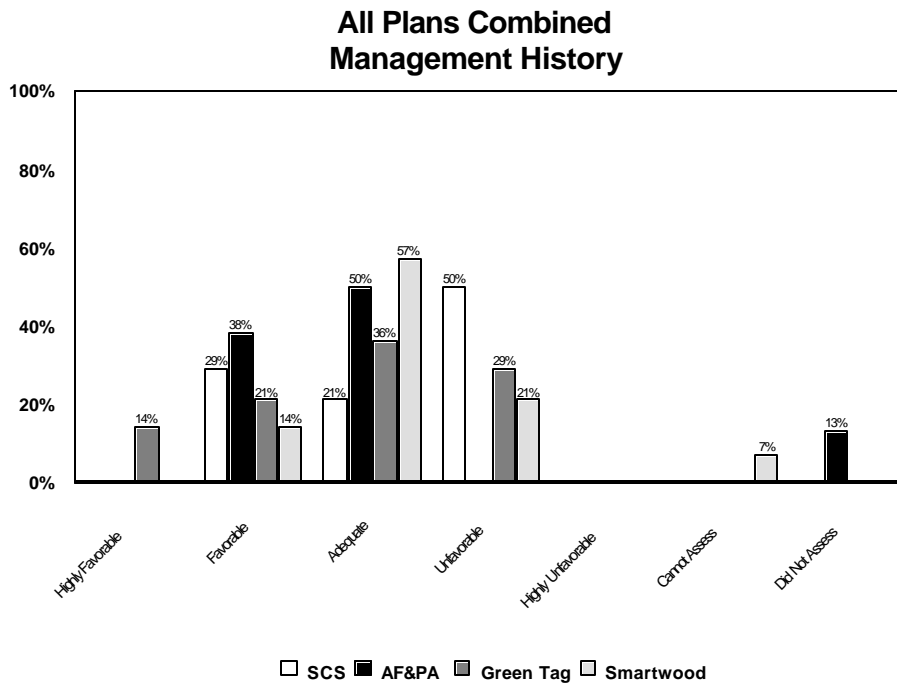


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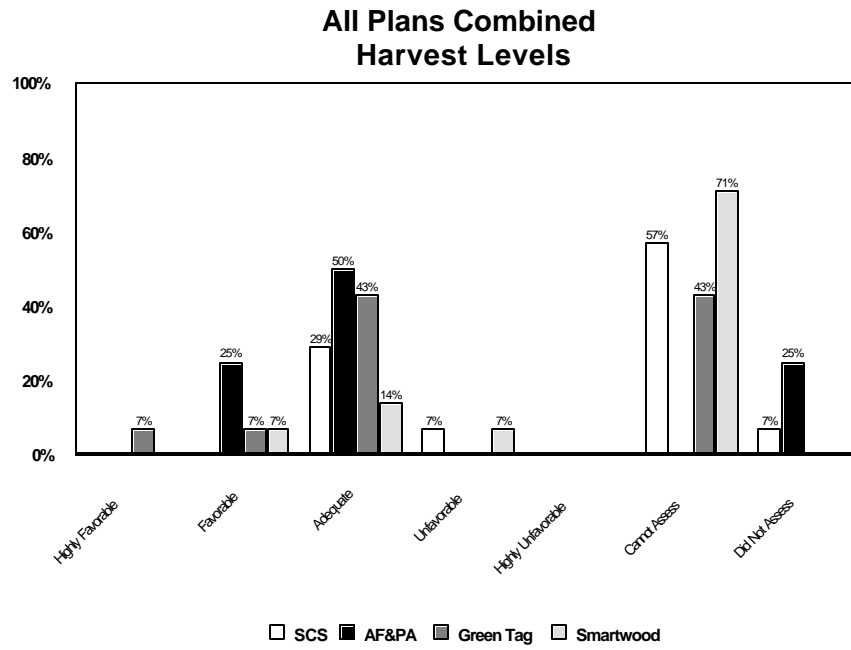


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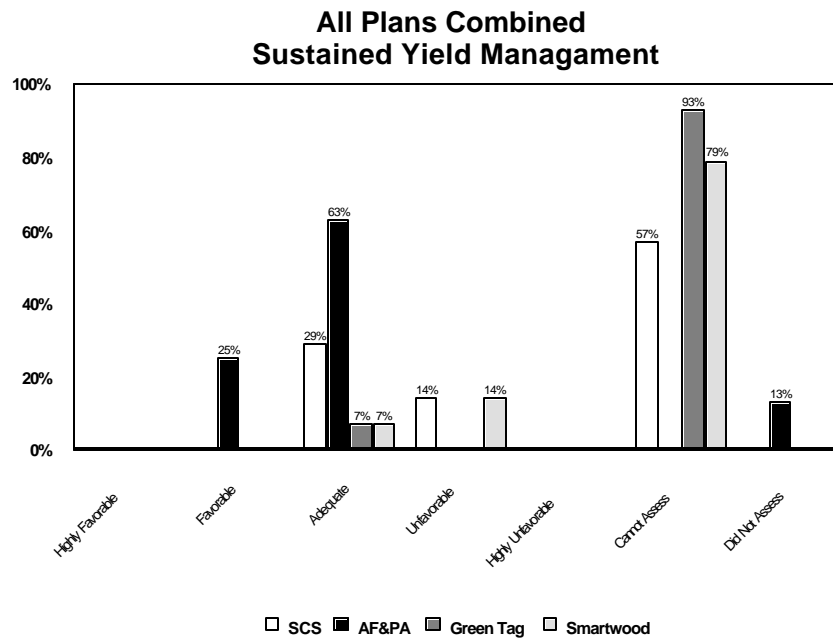


Figure 13.

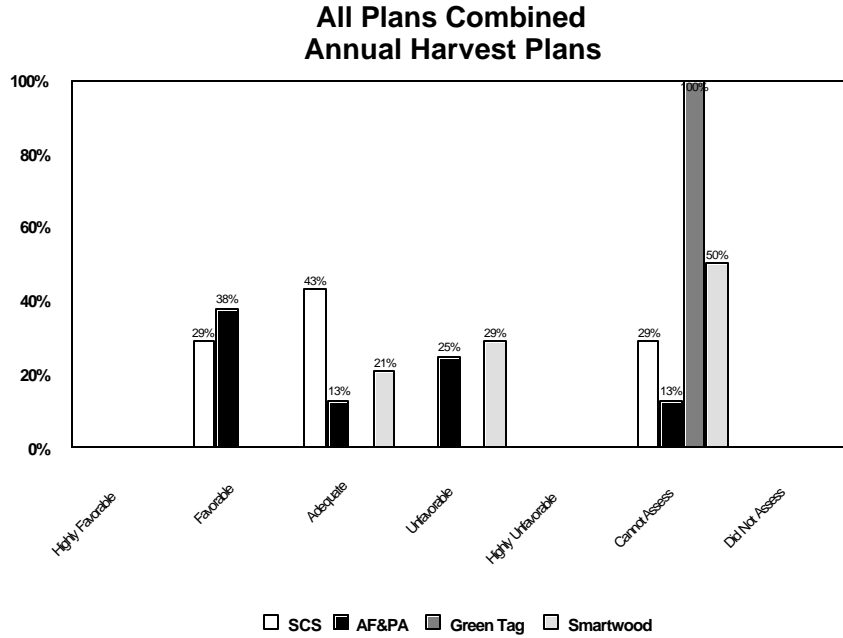


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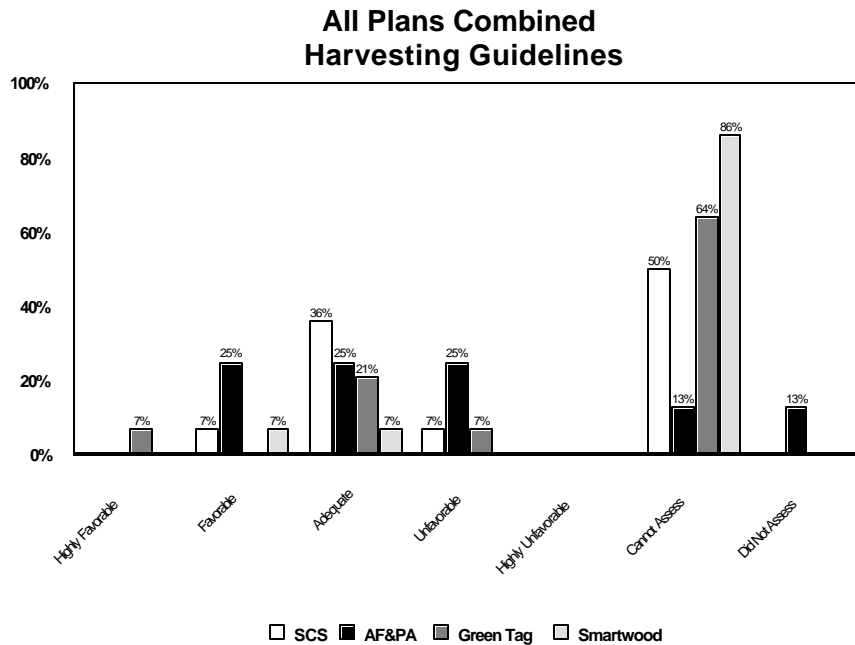


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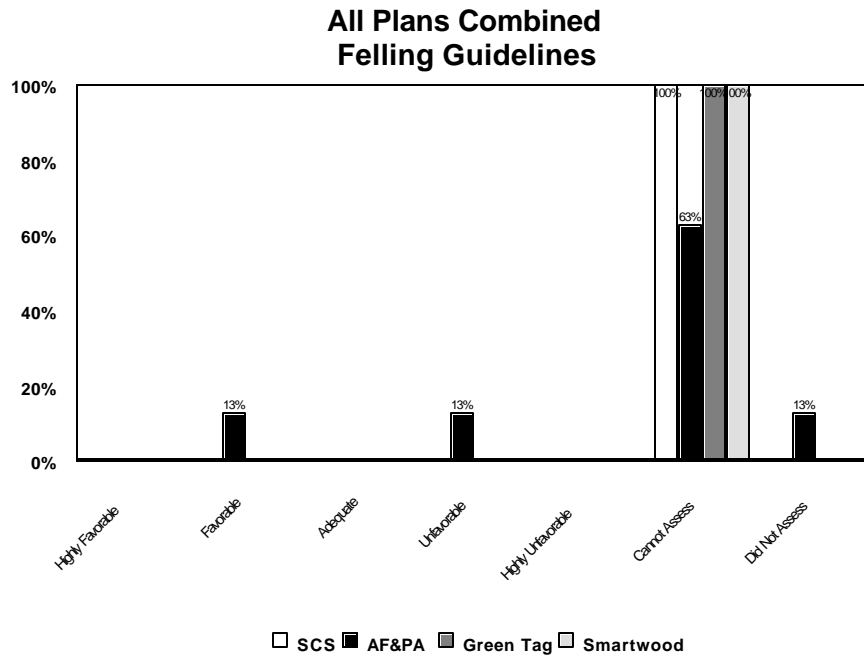


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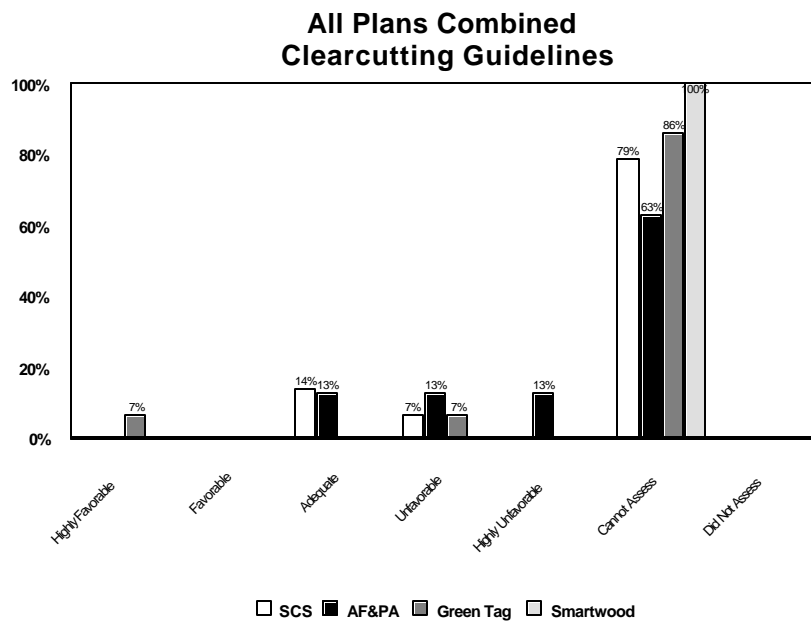


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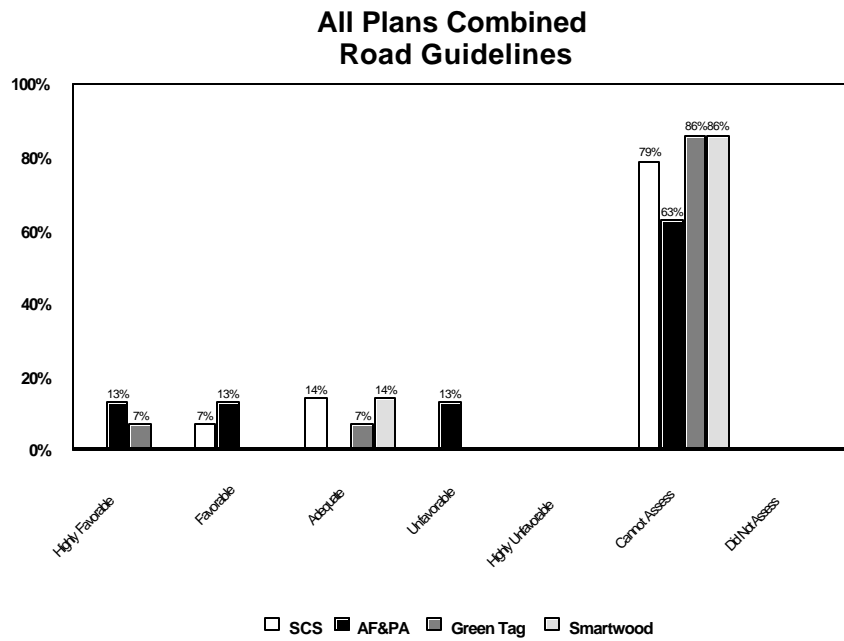


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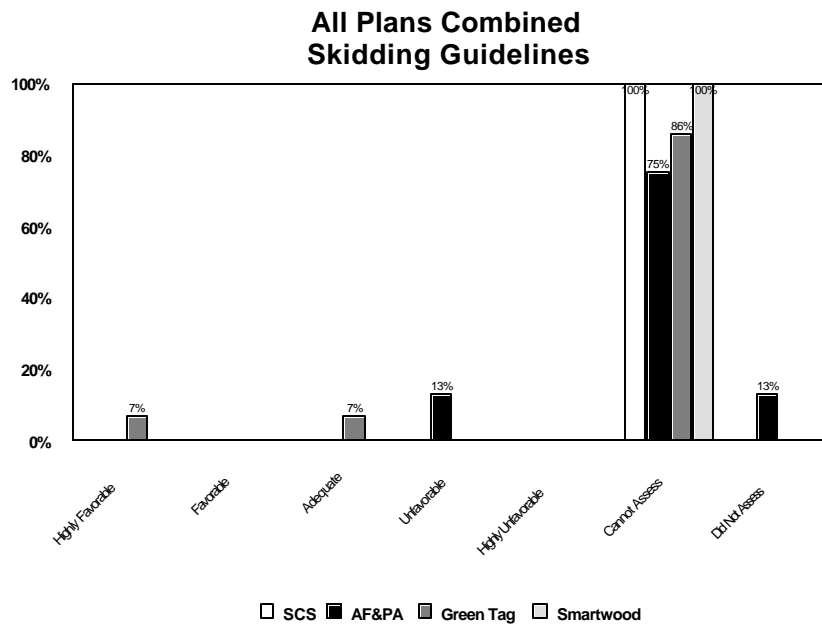


Figure 19.

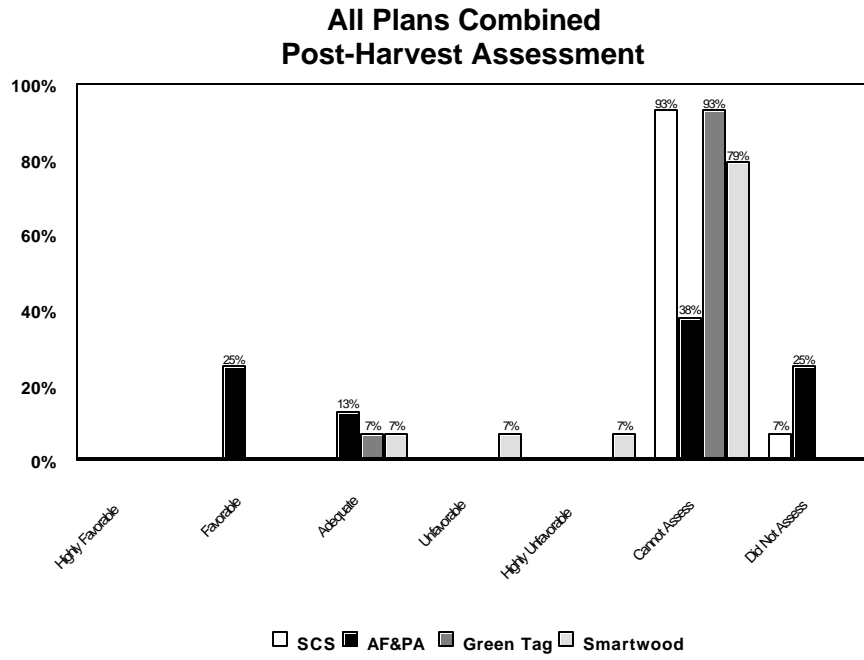


Figure 20.

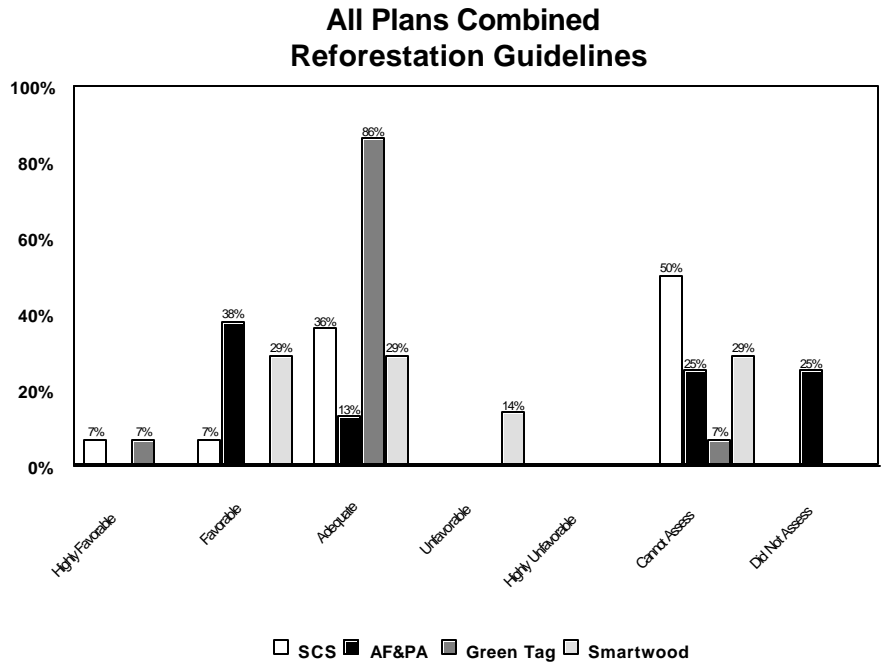


Figure 21.

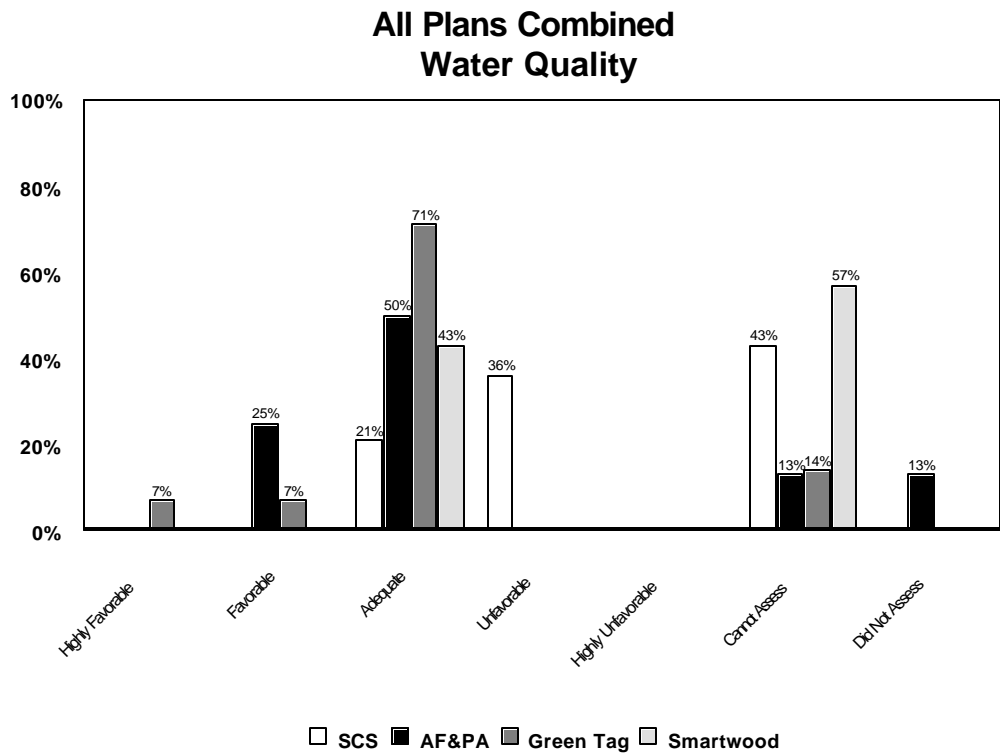


Figure 22.

All Plans Combined Chemical Guidelines

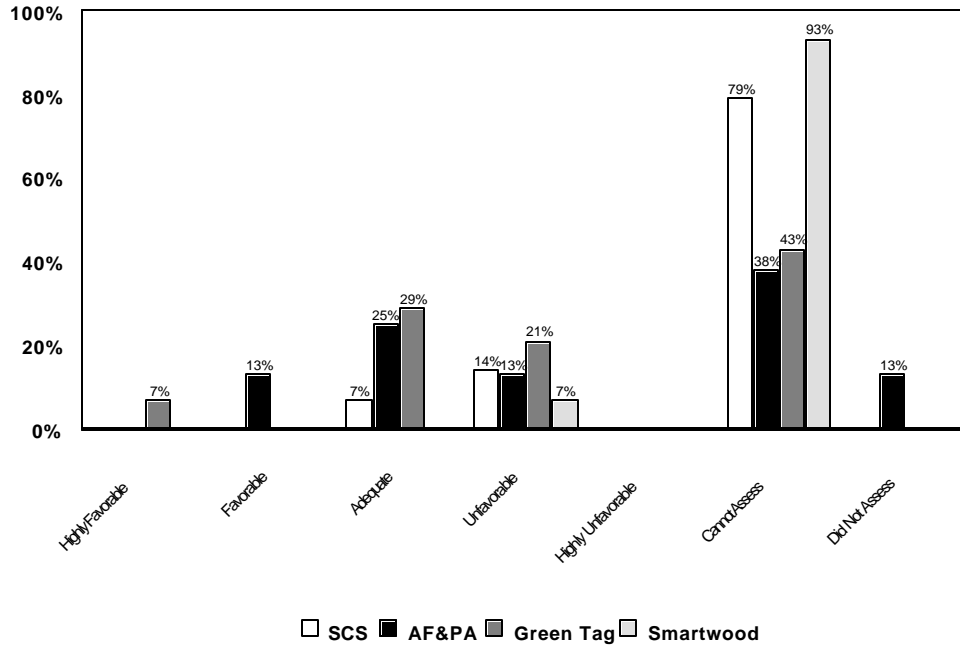


Figure 23.

All Plans Combined Fire/Insects Disease

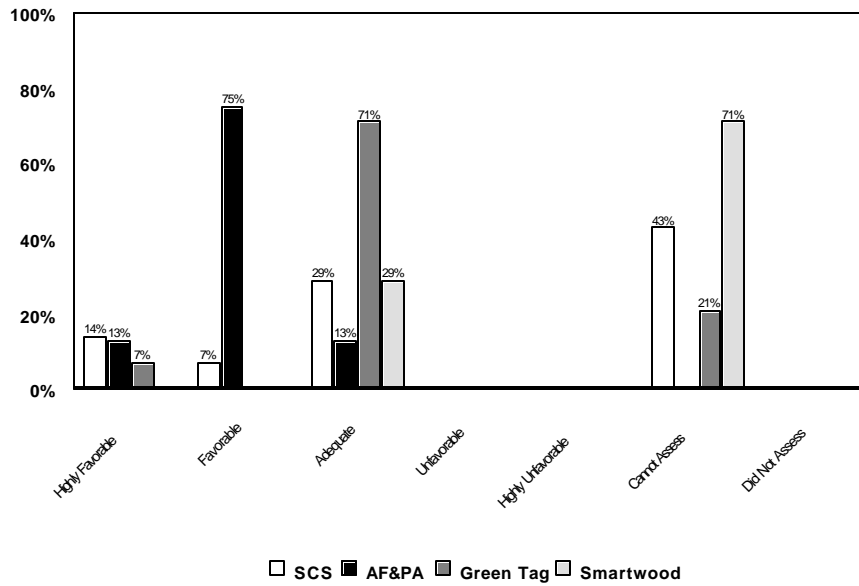


Figure 24.

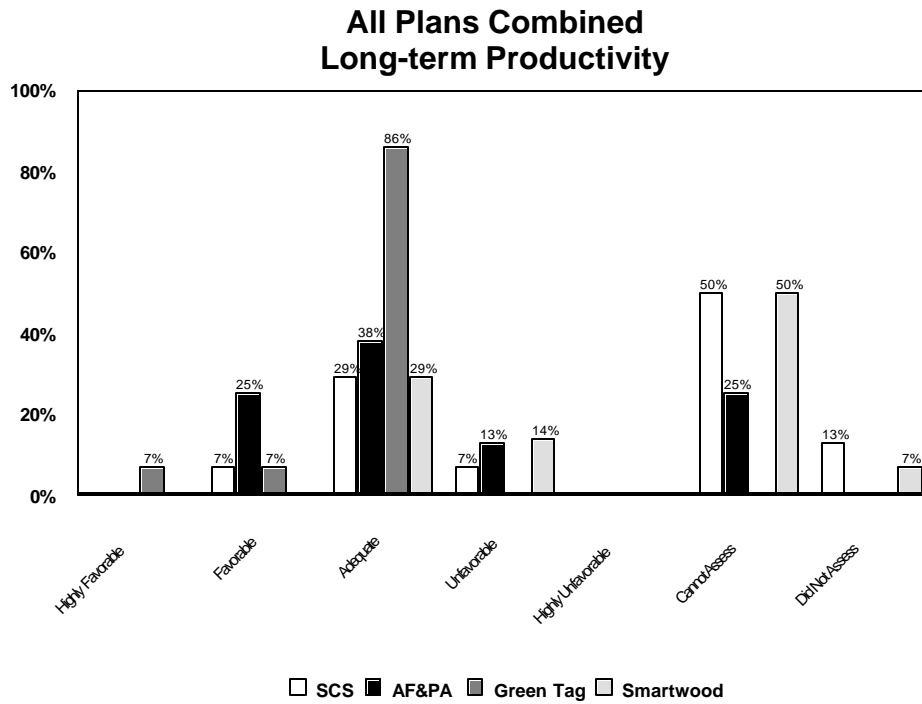


Figure 25.

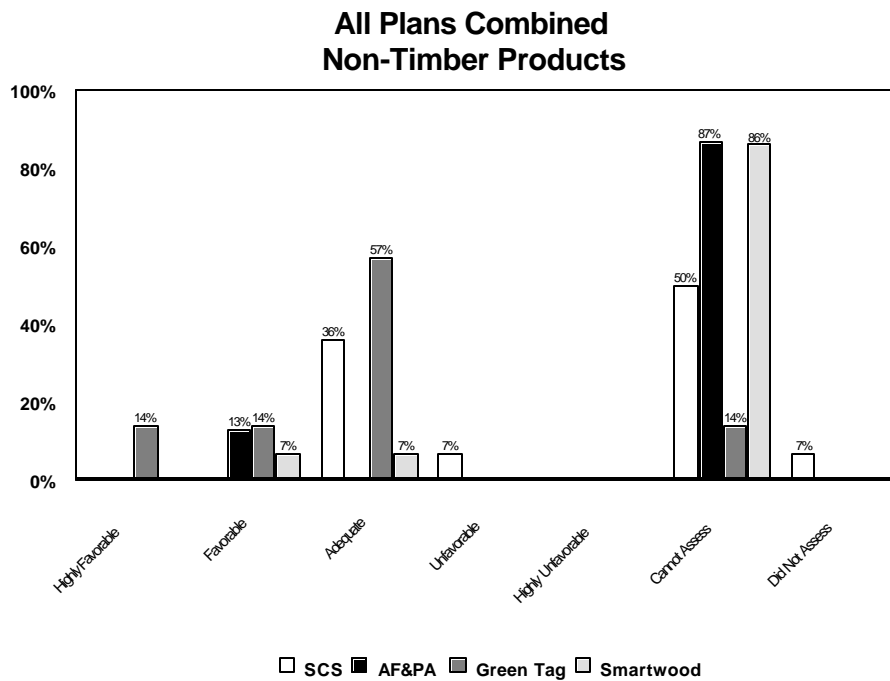


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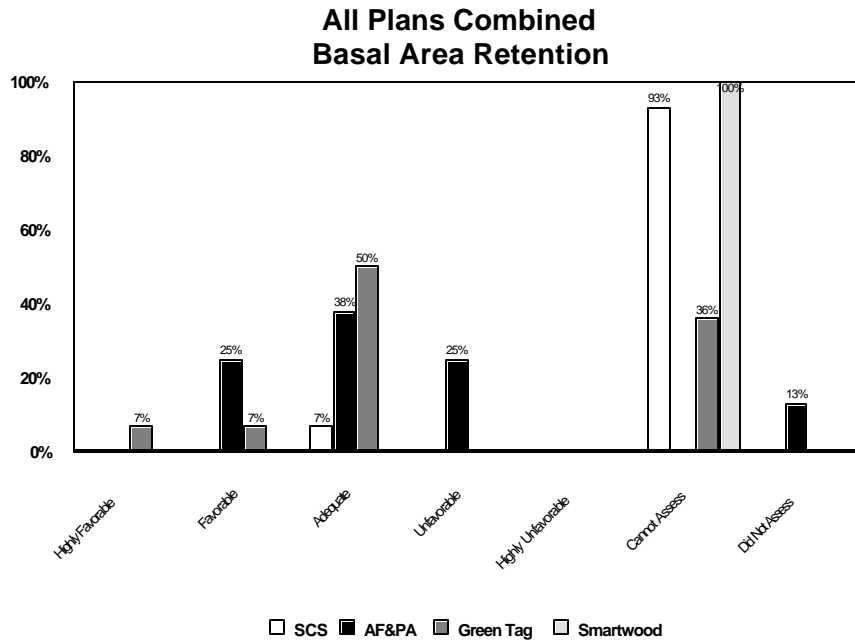


Figure 27.

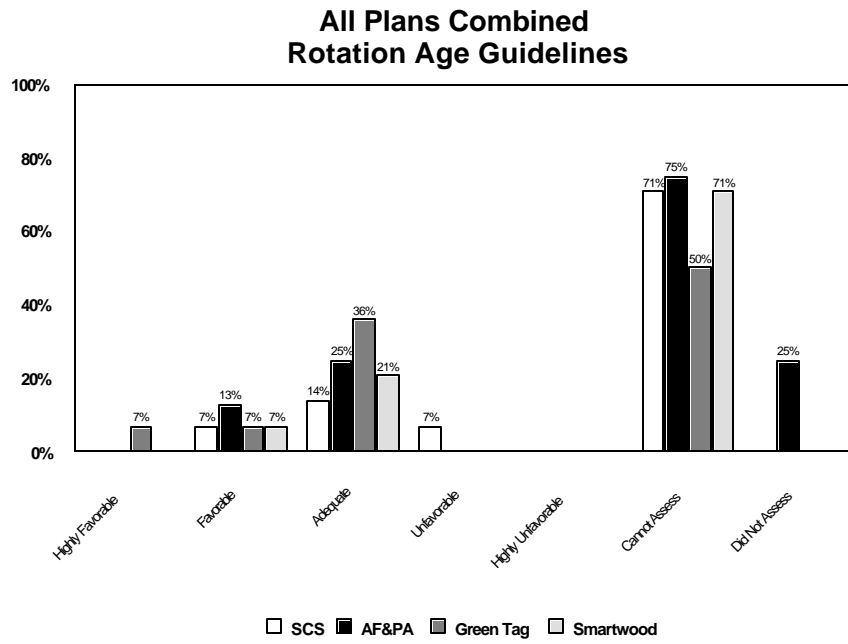


Figure 28.

All Plans Combined Fragmentation Guidelines

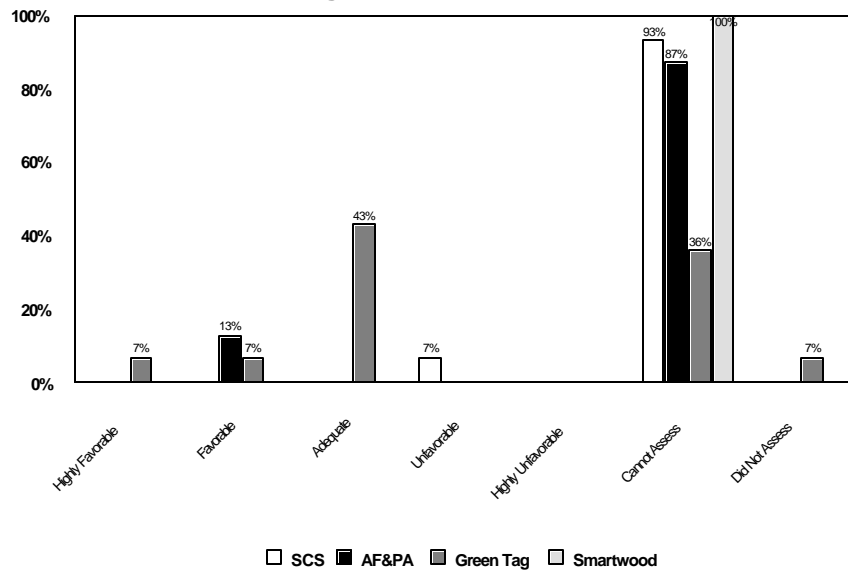


Figure 29.

All Plans Combined Biological Resources

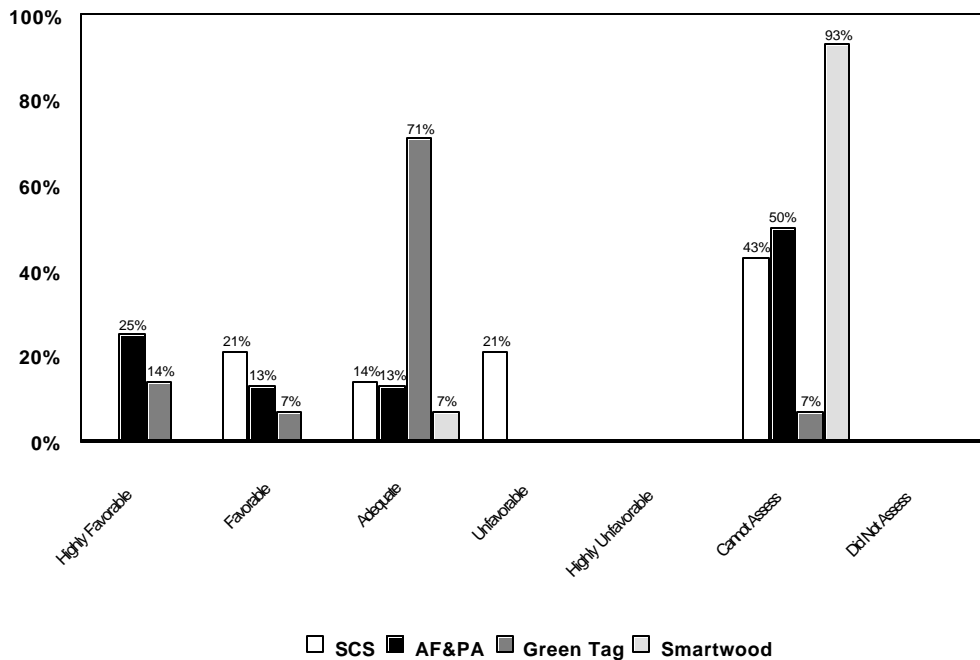


Figure 30.

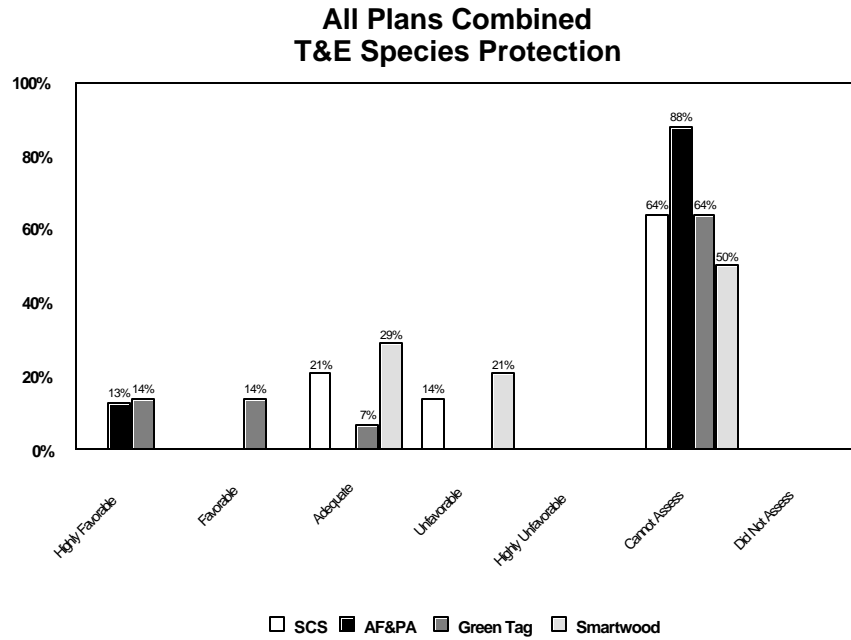


Figure 31.

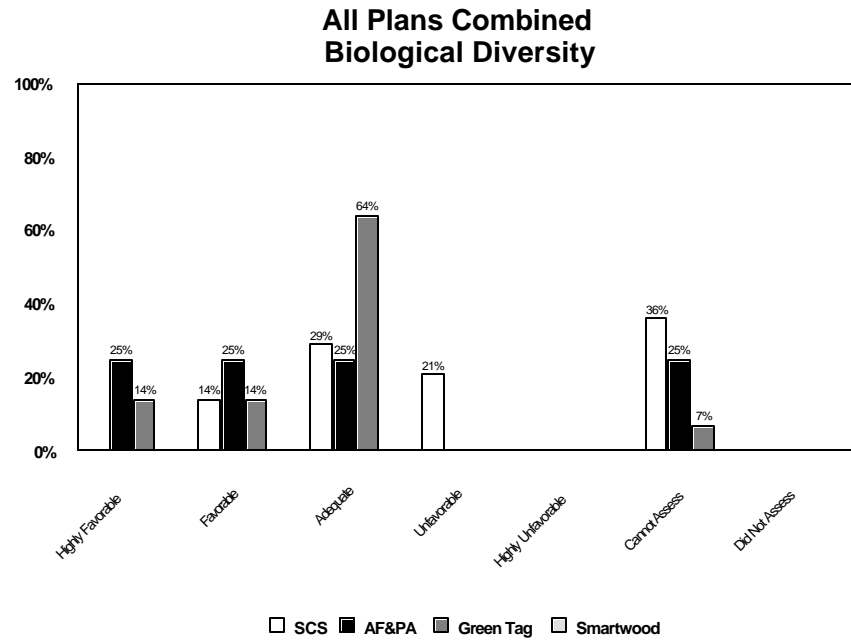


Figure 32.

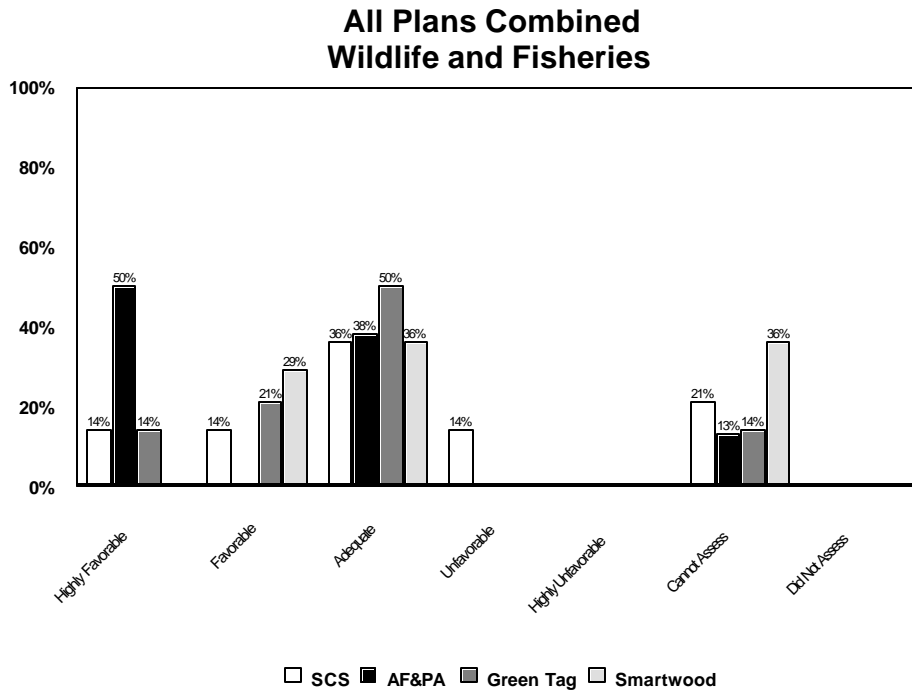


Figure 33.

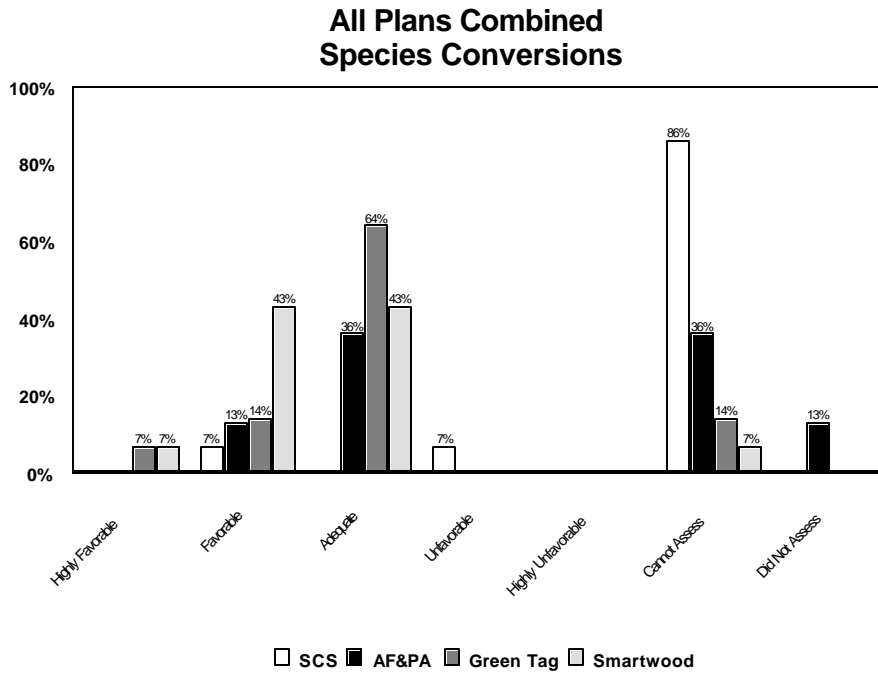


Figure 34.

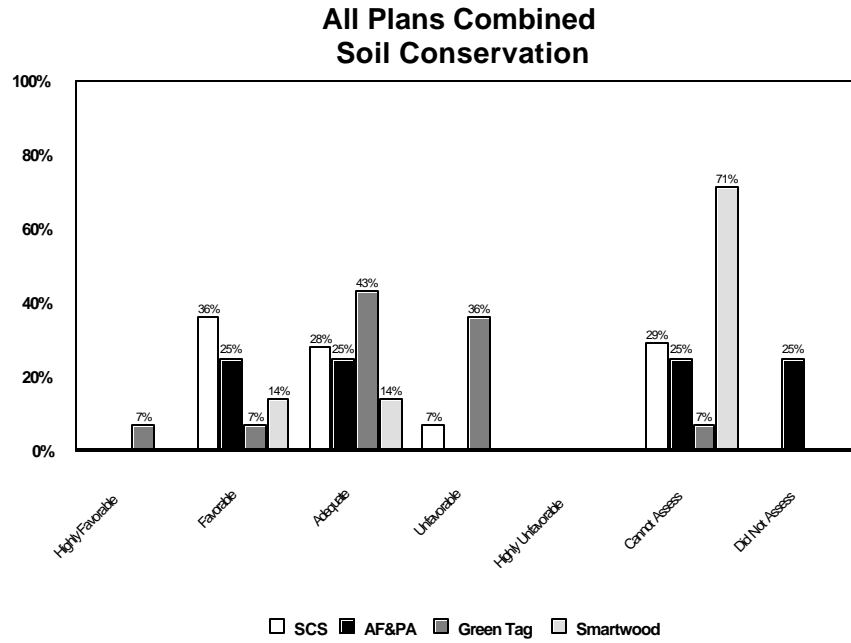
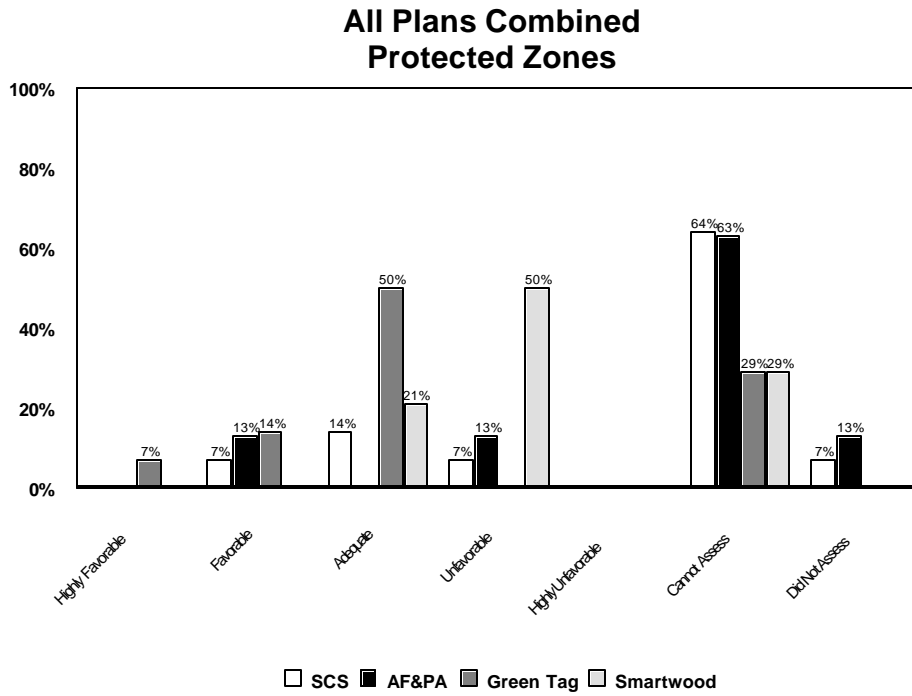
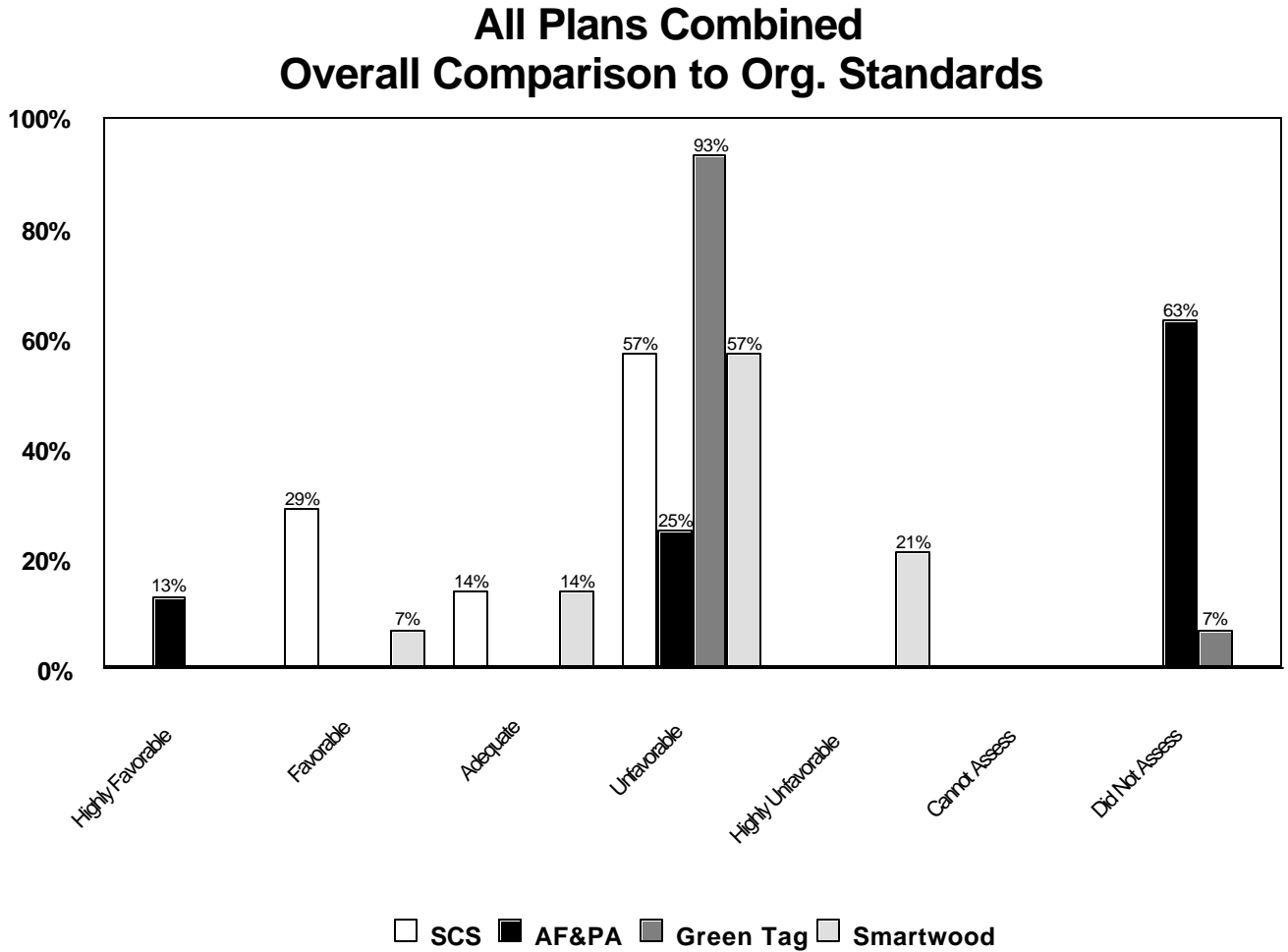


Figure 35.



Two summary questions were posed to respondents. The first asked them to give an impression of the overall comparison of the Louisiana Forest Stewardship Program management plans to their respective organization's certification standards. As seen in **Figure 36**, generally, the comparison is unfavorable with the exception of AF&PA, which did not provide a response to this question for 63% of the 14 plans provided for review.

Figure 36.



Overall comparison to certifier’s standards for each plan

Table 5 shows how these responses are distributed for each Louisiana Forest Stewardship Program management plan evaluated.

Table 5. Overall Comparison to Organization Certification Standards

Plan Number and Certifier	Highly Favorable	Favorable	Adequate	Unfavorable	Highly Unfavorable
1					
SCS		X			
GREEN TAG				X	
SMARTWOOD				X	
2					
SCS				X	
GREEN TAG				X	
SMARTWOOD				X	
3					
SCS				X	
GREEN TAG				X	
SMARTWOOD					X
4					
SCS				X	
GREEN TAG				X	
SMARTWOOD				X	
5					
SCS				X	
GREEN TAG				X	
SMARTWOOD				X	
6					
SCS			X		
GREEN TAG				X	
SMARTWOOD					X
7					
SCS				X	
SFI				X	
GREEN TAG				X	
SMARTWOOD					X

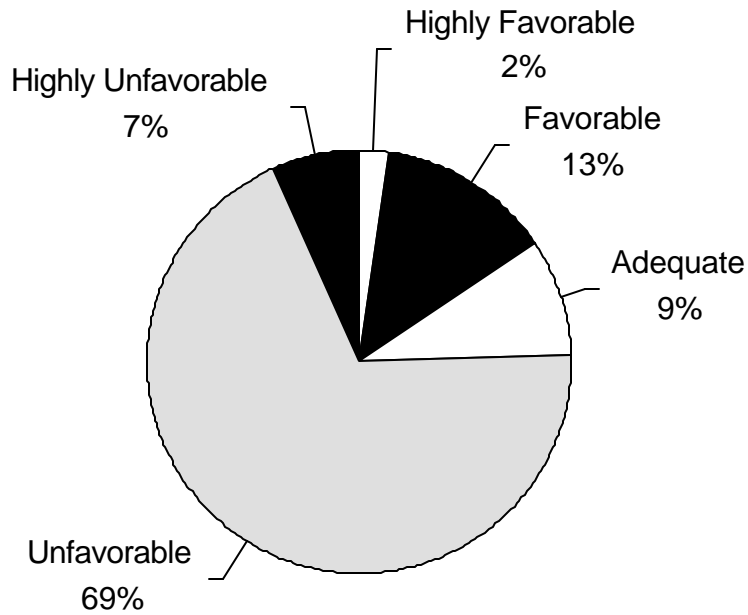
Table 5 (continued). Overall Comparison to Organization Certification Standards

Plan Number and Certifier	Highly Favorable	Favorable	Adequate	Unfavorable	Highly Unfavorable
8					
SCS		X			
GREEN TAG				X	
SMARTWOOD				X	
9					
Plan Number and Certifier	Highly Favorable	Favorable	Adequate	Unfavorable	Highly Unfavorable
9					
SCS				X	
GREEN TAG				X	
SMARTWOOD				X	
10					
10					
SCS				X	
SFI				X	
GREEN TAG				X	
SMARTWOOD				X	
11					
11					
SCS				X	
GREEN TAG				X	
SMARTWOOD				X	
12					
12					
SCS		X			
GREEN TAG				X	
SMARTWOOD				X	
13					
13					
SCS		X			
SFI	X				
GREEN TAG		X			
SMARTWOOD		X			
14					
14					
SCS			X		
GREEN TAG			X		
SMARTWOOD			X		
Totals	1	6	4	31	3

An analysis across all plans and all respondent certification entities indicates that 69% of the Louisiana Forest Stewardship Program management plans compare unfavorably to certification standards (**Figure 37**).

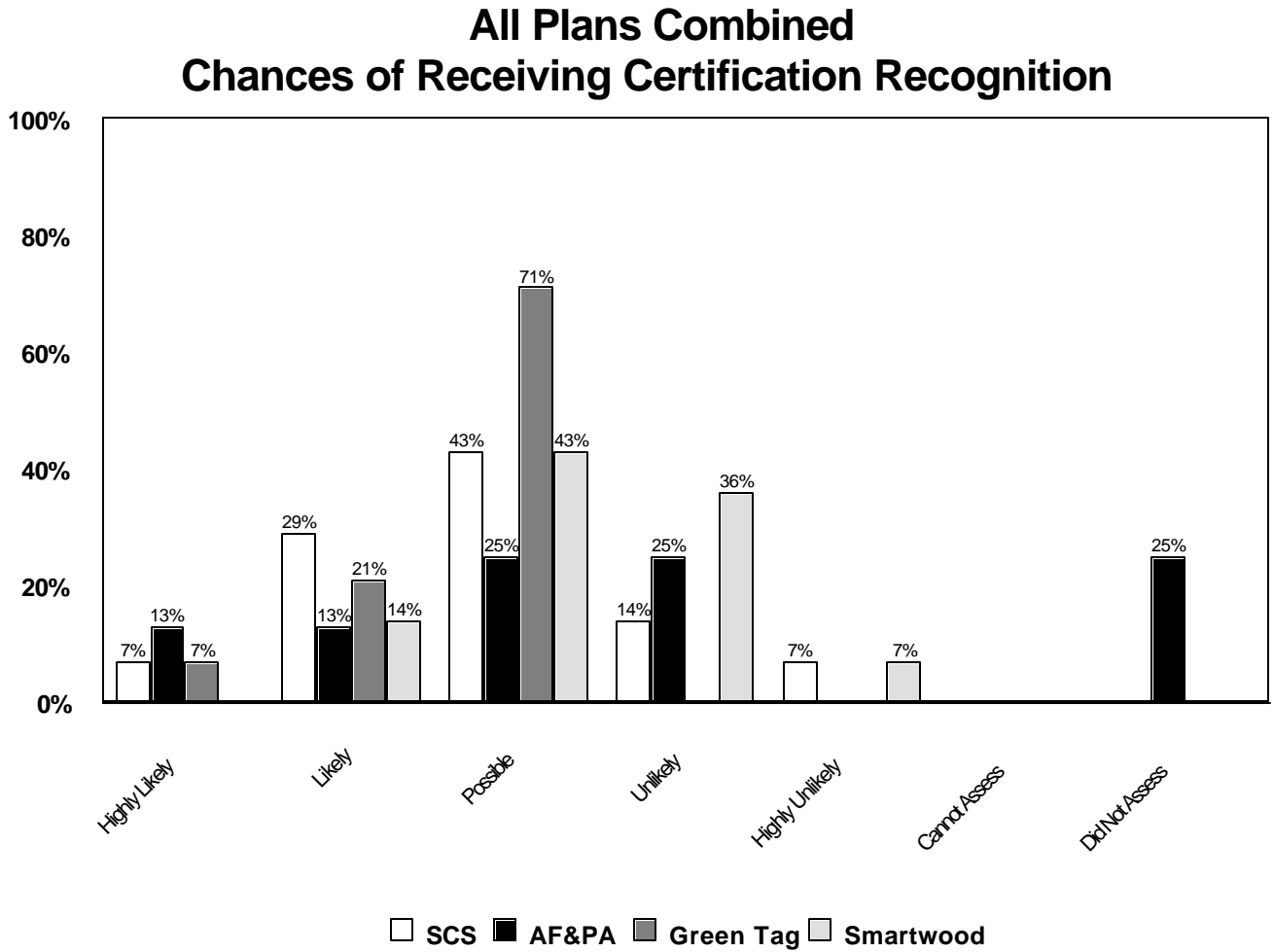
Figure 37.

**Level of Comparison Favorability to Organization Certification Standards
All Plans Combined-All Responses Combined**



The second summary question simply asked the respondents what the chances that the management plans would be receive certification under the various schemes. **Figure 38** shows that responses are normally distributed around “possible”.

Figure 38.



Overall comparison to certifier’s standards for each plan

Table 6 shows how the chance for receiving certification recognition is distributed for each Louisiana Forest Stewardship Program management plan evaluated.

Table 6. Chances of Receiving Certification Recognition

Plan Number and Certifier	Highly Likely	Likely	Possible	Unlikely	Highly Unlikely
1					
SCS		X			
GREEN TAG			X		
SMARTWOOD			X		
2					
SCS			X		
SFI			X		
GREEN TAG			X		
SMARTWOOD			X		
3					
SCS		X			
GREEN TAG			X		
SMARTWOOD				X	
4					
SCS			X		
GREEN TAG			X		
SMARTWOOD				X	
5					
SCS			X		
GREEN TAG			X		
SMARTWOOD				X	
6					
SCS		X			
GREEN TAG			X		
SMARTWOOD				X	
7					
SCS		X			
SFI		X			
GREEN TAG			X		
SMARTWOOD				X	

Table 6 (continued). Chances of Receiving Certification Recognition

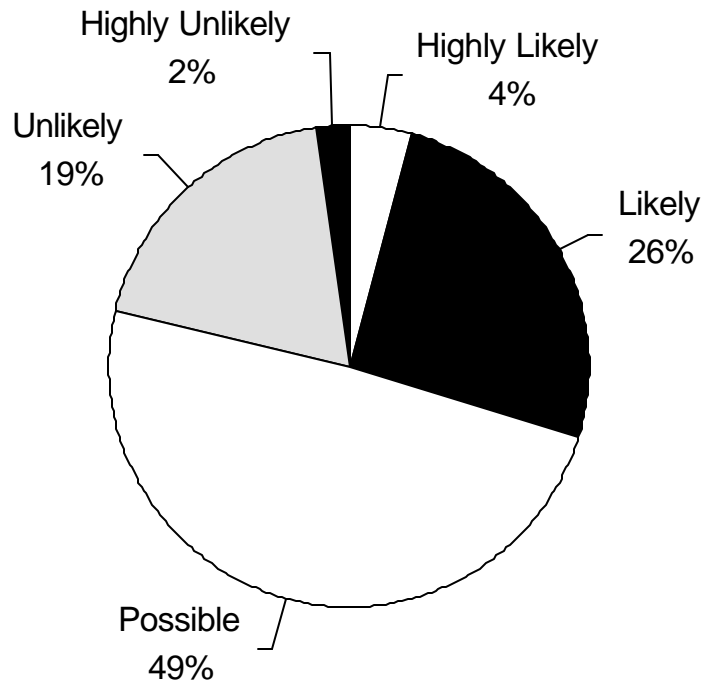
Plan Number and Certifier	Highly Likely	Likely	Possible	Unlikely	Highly Unlikely
8					
SCS		X			
SFI		X			
GREEN TAG		X			
SMARTWOOD		X			
Plan Number and Certifier	Highly Likely	Likely	Possible	Unlikely	Highly Unlikely
9					
SCS			X		
GREEN TAG			X		
SMARTWOOD			X		
10					
SCS				X	
SFI				X	
GREEN TAG			X		
SMARTWOOD				X	
11					
SCS			X		
SFI				X	
GREEN TAG			X		
SMARTWOOD					X
12					
SCS			X		
GREEN TAG		X			
SMARTWOOD			X		
13					
SFI	X				
GREEN TAG	X				
SMARTWOOD		X			
14					
SCS			X		
GREEN TAG		X			
SMARTWOOD			X		
Totals	2	12	23	9	1

An analysis across all plans and all respondent certification entities indicates that 49% of the Louisiana Forest Stewardship Program management plans could possibly be certified when cast against certification entity standards (**Figure 39**). An additional 30% were deemed likely or highly likely to be certified while 21% were unlikely or highly unlikely to be certified.

Figure 39.

Level of Likelihood that Louisiana Forest Stewardship Program Management Plans Would Receive Certification

All Plans Combined-All Responses Combined



Additional Certifier Comments on Forest Stewardship Plans

Respondents from SmartWood and Green Tag submitted additional comments further clarifying their responses.

Smartwood

The plans vary tremendously in content and quality. Most simply do not give enough information to evaluate them for FSC certification, i.e. the FSC Principles and Criteria are simply not addressed.

As judged by the plans, very few of the properties could be certified based strictly on what is in the plan, even if everything is being done. The plans themselves would likely receive preconditions or conditions, depending on the scale and intensity of the operations.

There is no doubt that several of the properties could be certified by FSC, as there appears to be the necessary commitment by the landowner. However, the plans in many cases would have to be re-written and the commitment to FSC Principles and Criteria shown in the plan along with how this commitment would be carried out.

Green Tag- NATIONAL WOODLAND OWNERS ASSOCIATION

Upon review of 14 Louisiana Forest Stewardship Plans provided, the following inconsistencies were found in ALL, of the plans:

- lack of financial analysis and projections
- lack of record keeping and tracking system
- lack or no mention of soil and water-conservation plan

Many of the plans were also lacking:

- chemical guidelines
- logging guidelines
- community relations
- regular plan evaluation and assessment
- timber, plant and animal inventories

Only Plan #13 comes closest to satisfying the criteria to be certified under the Green Tag program.

Independent Review of the Management Plans

In addition to the evaluation of the management plans by certification entities, an independent analysis of the plans compared to AF&PA SFI and SmartWood programs was commissioned. The 14 management plans, which were prepared under Louisiana guidelines, were independently reviewed against the FSC and SFI standards by an independent consultant, FORME Consultants, New Zealand (See Appendix C). The desktop review determined whether the plans match up against the standard criteria and to identify where plans do not meet criteria.

For reporting purposes the consultant developed a matrix for each of the standards, listing the standard objectives and criteria and matching these against each of the management plans. The matrix is supported by narrative, describing (if necessary), where the plans need to be strengthened to meet the requirements of the standards. The plans were assessed against each criterion using the following scoring system:

- Conforms.
- Does not conform.
- Is not addressed.

The following descriptions were used to identify each of the management plans. Management Plan Identifier Matrix (**Table 7**).

Table 7. Independent Review Management Plan Identifier Matrix

MANAGEMENT PLAN NUMBER	DESCRIPTION
1	Total Acres = 40, Forested Acres = 30.5
2	Total Acres = 80
3	Total Acres = 82, Forested Acres = 76
4	Total Acres = 236, Forested Acres = 236
5	Total Acres = 40, Forested Acres = 40
6	Total Acres = 16, Forested Acres = 16
7	Total Acres = 360, Forest Acres = 350
8	Total Acres = 200, Forested Acres = 180
9	Forested Acres = 120
10	Total Acres = 100, Forested Acres = 98
11	Total Acres = 133, Forested Acres = 31
12	Total Acres = 50, Forested Acres = 40
13	Total Acres = 667, Forested Acres = 645
14	Total Acres = 1495

Review Methodology

Fourteen management plans were reviewed with regard to their treatment of FSC and SFI principles and objectives. The 10 FSC and 11 SFI principles, and the criteria under each principle are identified in the matrix.

Information presented in the management plans is not specific enough nor is there sufficient background information to enable a finite conclusion on whether plans and management systems comply with FSC or SFI principles.

Results presented in the matrix reflect whether FSC and SFI principles and criteria/objectives have been addressed in the management plans.

No decision other than whether the principles and criteria have been partially addressed (P) or not addressed at all are possible (Table 8).

In some cases the information presented in the plans may imply that other actions have been or are being taken to comply with management objectives or principles and criteria and therefore may be classified as having been partially addressed.

For assessment under FSC principle 10, forests that have been replanted are interpreted as being plantations.

In general most of the forests are being managed with two major objectives in mind:

1. To provide an economic return from the exploitation of timber resources
2. To provide for and/or enhance wildlife values.

The ways these objectives are to be achieved are widely covered in the management plans but in most cases sufficient information is not provided in the plans to conclude solid indications of compliance.

Many other FSC and SFI principles and values are not addressed at all. In particular coverage of social issues is non-existent and monitoring and assessment, although implied in the various plans, is not addressed.

The structure of the Louisiana Forest Stewardship Management System appears to lend itself to the concept of FSC Group Certification. The system itself is certified under a manager and individual tracts of forest, ownership units, are certified under that management system.

On the basis of the plans submitted for review, we conclude that work is required to develop a management plan framework to ensure compliance with SFI and/or FSC.

Table 8 – FSC Principles & Criteria- Management Plans Status

Plan ▾ Principles & Criteria ▾	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 – Compliance with Laws & FSC Principles														
1.1 – National & local laws														
1.2 – Fees, Royalties, taxes														
1.3 – International agreements														
1.4 – Conflicts														
1.5 – Unauthorized activities							P							
1.6 – Managers commitment														
2 – Tenure & Rights Responsibilities														
2.1 – Long term tenure & rights					P									P
2.2 – Local communities rights													P	
2.3 – Disputes mechanisms														
3 – Indigenous Peoples Rights														
3.1 – Indigenous peoples control														
3.2 – Forest management impacts on tenure														
3.3 – Special sites														
3.4 – Traditional knowledge compo														
4 – Community Relations & Workers Rights														
4.1 – Employment opportunities														
4.2 – Employees health & safety														
4.3 – ILO conventions														
4.4 – Social Impact														
4.5 – Grievance mechanisms														
5 – Benefits From The Forest														
5.1 – Economic viability	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5.2 – Local processing														
5.3 – Minimize waste & damage														
5.4 – Diversified local economy														
5.5 – Forest services & resources														
5.6 – Harvest sustainability														

Table 8 – FSC Principles & Criteria- Management Plans Status (Continued)

6 – Environmental Impact														
6.1 – Assessment of Impacts	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6.2 – Rare species safeguards				P									P	P
6.3 – Ecological functions & values	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6.4 – Existing ecosystems	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6.5 – Written protection guidelines														
6.6 – Use of chemicals														
6.7 – Disposal of waste														
6.8 – Biological control														
6.9 – Use of exotic species														
6.10 – Plantation conversion														
7 – Management Plan														
7.1 – Plan content	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7.2 – Plan revision		P												
7.3 – Forest worker training														
7.4 – Plan publicly available														
8 – Monitoring & Assessment														
8.1 – Monitoring procedures														
8.2 – Research & data collection														
8.3 – chain of custody														
8.4 – Results implemented														
8.5 – Results are publicly available														
9 – Maintenance of High Conservation Value Forest														
9.1 – Assessment of attributes	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9.2 – Consultation	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9.3 – Specific measures														
9.4 – Annual monitoring														
10 - Plantations														
10.1 – Management objectives	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10.2 – Plantation design	P	P	P				P	P	P	P	P	P	P	P
10.3 – Diversity	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10.4 – Species selection	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10.5 – Portion of natural forest	P	P	P	P	P	P	P	P	P				P	P
10.6 – Maintenance of soils	P		P	P	P	P	P	P	P		P	P	P	P
10.7 – Protection measures	P					P	P		P	P		P	P	P
10.8 – Monitoring of impacts													P	

10.9 – Conversion date														
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III. RESEARCH METHODOLOGY & DESIGN

Sampling

This study involved evaluation of fourteen management plans that have been accredited under the Louisiana Forest Stewardship Program administered by the Louisiana Department of Agriculture and Forestry (LDAF). Of the over 100 landowners participating in the program, the fourteen management plans used in the study were randomly selected using an every-nth selection process.

LDAF provided these management plans with all identifying information blacked out to retain confidentiality. None of the forestland owners were identified in any documents generated in the study.

Research Instrument and Procedures

The instrument developed for this study consisted of two parts. First was a matrix of elements found in the four certification schemes included in the study (SmartWood, Scientific Certification Systems, Green Tag and Sustainable Forestry Initiative). The second component of the instrument was two Likert-type scale questions and two open-ended questions (Appendix A).

Forest certification evaluators from the four certification entities were contacted and agreed to participate in the study. These individuals evaluated the fourteen management plans using the instrument provided. It was clearly communicated to participants that questionnaires were completely and confidential. Study evaluators were promised a copy of summary study results for participating in the study.

Pre-test

Pre-testing of the draft research instrument was conducted using an iterative process with the selected individuals from the certification entities. In addition, input was solicited from the Louisiana Department of Agriculture and Forestry, and faculty at Louisiana State University. Based on pre-testing, the instrument was refined before final distribution.

Data Analysis

Data entry was be closely supervised by the principal investigator to ensure data entry accuracy. A computer software package, SPSS with analytical and statistical tools, was used in data analysis. A variety of qualitative and quantitative techniques were used to analyze and report data. Quantitative data reporting includes tables, graphs, charts and other figures to convey study results. Descriptive and univariate statistical methods were also used.

IV. SUMMARY

Non-industrial private forestland (NIPF) owners comprise a significant part of forest ownership in the United States. Studies have shown that NIPF goals and objectives for their forestland are diverse. In the context of forest certification, initiatives are being developed by certifiers to accommodate the unique ownership characteristics of NIPFs.

To date, there has been scant research that looks at state-level programs that perform in a fashion analogous to private NIPF certification. This research partially fills that gap by looking at the potential for participation by the Louisiana Department of Agriculture and Forestry through the Stewardship Program as a possible alternative to third-party certification.

On average, the fourteen Forest Stewardship Program management plans do not compare favorably to the certification schemes represented in the study. The AF&PA SFI program rated highest for all critical element areas examined (Informational, Timber Management and Environmental) while the plans compared least favorably to SmartWood criteria.

The authors suggest that mutual recognition agreements between the Stewardship Program and the certification organizations would benefit all parties, with the biggest potential benefit going to forest landowners. Prior research indicates showing that Louisiana NIPF landowners prefer state certification (in theory, at least), which strong case for growing the Stewardship program.

This information may help in the development of viable alternative strategies to third-party certification in Louisiana as well as help landowners develop certification planning and marketing tools for those that wish to participate in the third-party certification process.

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V. Appendices

Appendix A. Program Descriptions

****Note that all program descriptions are self-described from each certification entity. They were copied verbatim to give the reader a sense of the positioning strategy of each****

LOUISIANA LANDOWNER FOREST STEWARDSHIP PLAN¹

Landowner voluntary participation in the Forest Stewardship Program represents a good faith commitment to implement strategies suggested in the Landowner Forest Stewardship Plan. Private property rights cannot, by law, be jeopardized through participation in this program.

The Landowner Forest Stewardship Plans must be prepared or verified, as meeting minimum standards of a Forest Stewardship Plan, by a professional resource manager. Plans must identify and describe actions to protect, manage, maintain and enhance relevant resources listed in the law (soil, water, range, aesthetic quality, recreation, timber, and fish and wildlife) in a manner compatible with landowner objectives. The plan must be approved by the State Forester or a representative of the State Forester.

Landowners must be involved in plan development by setting clear objectives and should understand clearly the completed plan. A well prepared plan will:

- Clearly state landowner's objectives.
- Have a cover page.
- Provide for authorship and/or signature lines within the document.

The plan preparer should consider and evaluate resource elements present and include a brief description of those that are applicable and their importance to the ownership.

Resource elements to be considered are:

- | | |
|-------------------------|---|
| 1. Soil Interpretations | 7. Fish |
| 2. Water | 8. Wildlife |
| 3. Range | 9. Forest Health |
| 4. Aesthetic Quality | 10. Archeological, Cultural, and Historic Sites |
| 5. Recreation | 11. Wetlands |
| 6. Timber | 12. Threatened and Endangered Species |

Management recommendations, or where appropriate, alternative strategies should be provided for those resource elements described. Prescriptions or treatments should be integrated and stand or site specific. An ownership map drawn to scale, or photo, to

¹ Forest Stewardship Program Handbook "National Standards and *Guidelines*" revised January 28, 1994.

include vegetation cover types, stream and pond location with a legend will enable the landowner to implement the plan.

Landowner's understanding may be improved by including activity summaries and appendices. Appendices might include:

- Description of assistance available and incentive programs
- Educational materials
- A glossary of terms
- An explanation of Federal, State and/or county regulatory programs, especially as they apply to:
 - * Archeological, cultural and historic sites
 - * Wetlands
 - * Threatened and Endangered Species

These last three items are covered by legislation other than the Cooperative Forestry Assistance Act of 1978, as amended by title X11 of the Food, Agriculture, Conservation and Trade Act of 1990 (16 U. S. C. 2101, et seq.), but must be considered for Federally funded programs.

The professional resource manager should discuss the Forest Stewardship Plan with the landowner, following completion, to assure understanding.

This Forest Stewardship Management Plan is designed to help guide the natural resource management activities on your property. The plan is based on your long term objectives in accord with the environment around your land. The management recommendations are for your consideration and are to assist in helping you reach the goal of a "Certified Stewardship Forest" landowner.

Certification Process:

When you have completed several of the management recommendations and you feel you have shown that you are working towards meeting your management objectives, contact the plan preparer and the process for certification will be initiated. A team will be formed consisting of the State Stewardship Coordinator, wildlife biologist, a representative of the MRCS, the resource specialist writing the plan and yourself. Team will review plan, inspect management accomplishment and discuss future management needs. If ready for certification, the sign will be presented at time of inspection.

Table 9. FOREST STEWARDSHIP PLAN COMPONENT DEFINITIONS

Plan Component:	Definition:
General Information	
1. Landowner information	Name, address, and phone number (not required if unlisted) of forest landowner (to be place on title page of plan).
2. Plan preparer	Name, signature ,address, and phone number of professional resource manager who prepared the plan (to be placed on title page of plan).
3. Plan preparation date	The date the plan was prepared
4. Legal description	Plat survey information: section, township and range.
5. Stewardship acres	The number of forested acres covered by this plan.
6. Landowner's goals for the property	In landowner's own words their long term objectives including a primary objective and at least one secondary objective.
7. General property description	A property overview giving general location, major forest types, general land forms, relevant description of the landscape, etc. (Usually one paragraph).
8. Interactions with surrounding properties	Describe stewardship activities within the context of the neighborhood and how interdependency may affect management.
9. Map of property	An aerial photo, drawing, or map that contains stand declinations, roads, boundaries, water, etc. clearly and adequately labeled. Include legend, north arrow, and scale bar.
10. Known threatened and endangered species (R)	Review a statewide database for possible presence of threatened and endangered (T&E) species (state and federal listing). If ME species are present, suggestions should be made for their protection and enhancement. If no T&E species found, note in general description or stand description.
11. Soils information	Describe how soils may affect the attainment of landowner goals. (Can be generalized over the entire property when soils are uniform).
Stand Information	
1. Stand history	A statement regarding the past use of the stand. Sources include the landowner, observation, old photos and neighbors.
2. Present stand condition	Present stand condition and acres based on a reliable field assessment. Not intended to be rated individually but rating base on items listed below.
A. Dominant vegetation	
1). Tree species	A listing of tree species found within the management area.
2). Size class	A listing of the different size classes of trees found on the property, with an estimate of the percentage of the entire stand that each class represents.
3). Stocking	A description of the relative population of trees within a stand. This can be expressed in tree per acre or basal area, along with terms such as (over-stocked, under-stocked) as long as these terms are clear to the landowner.
4). Timber quality	A statement indicating the quality of the timber (low, medium, high or cull)
5). Growth rate	The growth produced by the forest on a per acre per year basis measured by increment borings, growth models, etc.

Stand information continued	Definitions continued
B. Stand health	A statement describing the health and condition of the forest, including noted problems such as insects, disease, site hazards, or stocking.
C. Site quality	A statement describing the site capability for supporting forest growth and associated flora and fauna. Examples: Site index, habitat type classification system, etc. This should be expressed in technical terms along with terms the landowner can understand.
D. Stand volume	An expression of the amount of usable wood that is contained in the standing trees. Maybe included in the written section or a separate table. (Use only if viable cruse data is available).
3. Integrated items	If landowner's objective is in enhancing their land in a particular use, this will be a fundamental, well-developed part of the stewardship plan. In cases where the landowner's objectives do not include certain potential uses, the plan should offer the landowner a brief description of "what might be" if all options are pursued. Not intended to be rated individually but rating base on items listed below.
A. Fish and Wildlife Habitat Improvement	The potential use of the stand by fish and wildlife, as well as ways to minimize any negative impact through management activities. If wildlife enhancement an objective of the landowner, ,please specify the targeted species. Note: A separate section of the management plan maybe devoted to this objective and can be written be a wildlife biologist.
B. Water quality issues	A statement addressing any water quality issues that might be occurring in the forest and suggestions for optimizing impacts of management activities in water quality. May include site-specific BMP's.
C. Timber production Potential	This requirement can be met by including a non technical description of the site's relative potential based on soil types, present stocking levels, timber species, etc. Although timber production may not be the landowner's primary or secondary objective, this will communicate available options to the landowner.
D. Recreational opportunities	If not a primary or secondary objective of the landowner; however landowner indicates recreational use of the land, then address how management practices will either improve recreational value or not interfere with present use of the land.
E. Aesthetics	A statement describing the visual quality of the property, and covering the landowner's objectives on weather to manage for aesthetics. Include areas for potential aesthetic management, and the effect of other management activities on areas that are currently aesthetically valuable.
F. Wetlands	A statement describing the presence of any wetlands on the property, the potential effect of various management activities on wetlands, and efforts that will be made to protect them.
G. Important natural features	The amount of description needed to satisfy this requirement will depend on the particulars of each site. Dramatic viewscape, rock formations, waterfalls, scenic areas, rivers, streams, etc., should be described and taken into account in plan formulation.
H. Range(on forested acres)	A description of any segment of the property suitable for or currently in use as rangeland. If grazing is to occur in forested land, a grazing plan must be developed with the assistance of the NRCS.
I. Agricultural land	For a property to be certified as a "Stewardship Forest", the landowner must either have or applied for a conservation plan to be developed on the non-forested acres.
J. Cultural heritage resources	A description of any historically or culturally important areas or structures present. This may include buildings, cemeteries, or any other relevant entities. A brief statement should be made describing efforts that will be made to preserve cultural heritage resources.
K. Additional items	A description f any other resource found on property that is not covered in the categories above as well as management implications. This category should be utilized

	to make sure that any specific objective of the landowner not previously mentioned is addressed.
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Table 10. FOREST STEWARDSHIP PLAN RECOMMENDATIONS

Recommendations	Definitions
1. Schedule for completion of prescribed activities	Plan includes a schedule/summary for the completion of prescribed activities
2. Compatible with landowner objectives	Plan identifies and describes actions to be taken by the landowner to protect soil ,water, range, aesthetic quality, recreation, timber, and fish and wildlife resources present in a manner that is compatible with landowner objectives.
3. Plan length	Plan identifies length of time it is intended to cover (minimum 10 years)
Communication	
1. Summary of site-specific management activities	This should be a concise statement or section summarizing the activities detailed in the rest of the plan that will take place on the property.
2. Easy-to-follow logical format	The plan is formatted in such a way that the reader can logically follow the flow of ideas, and will understand what should be completed and why.
3. The writing style is easy to read and understand	Readability is subjective, but most people can agree on a well-written plan.
4. The writer avoids wordiness, jargon, and mistakes in grammar and spelling.	A missing comma, mis-capitalized word, absent parentheses, some use of jargon, a misspelled word, or incorrect grammar should not result in a "Not Acceptable" rating. If the plan on the whole contains few errors of this nature, it should be rated a successfully meeting this element.
5. The plan meets the landowner's needs and provides useful advice in a skilful way.	While this is probable the most subjective of the elements, the peer review/consensus process should be able to resolve any conflicts of opinion.
6. Contact information	Includes names and phone numbers of contacts who can assist the landowner in a variety of situations.

SMARTWOOD²

SmartWood's purpose is to improve the effectiveness of sustainable forestry in conserving bio-diversity and providing equity for local communities, fair treatment to workers, and creating incentives for businesses so that they can benefit economically from responsible forestry practices.

Initiated in 1989, SmartWood is the oldest and most extensive certification program in the world. SmartWood is a program of the Rainforest Alliance, an international nonprofit environmental group based in New York City. Though the program initially focused on tropical forests, today SmartWood now works in all forest types -- tropical, temperate and boreal -- and operations, including natural forests, plantations, large commercial operations and small-scale community projects. SmartWood has certified over 700 operations and over 4 million hectares worldwide, and demand for certified lumber from these operations is increasing rapidly. Products crafted from SmartWood certified wood now include furniture, musical instruments, flooring, and picture and window frames.

SmartWood's record of innovation and commitment to the highest principles of environmental and community integrity have established this program as the "gold standard" of certification schemes.

SmartWood is managed by a headquarters staff of experienced forestry specialists and administrators based at Rainforest Alliance offices in New York and Vermont, in collaboration with a growing number of independent nonprofit organizations that focus on forest monitoring, evaluations, assessments and forest product certification in tropical, temperate, and far northern regions.

SmartWood provides on-the-ground services to clients through its worldwide network of regional offices and independent, nonprofit organizations. By having regional managers in place at the local level, we are able to offer superior customer service to our certification clients and assist them with their certification needs. Each regional office focuses on building SmartWood's brand equity in the marketplace and delivering a full range of quality certifications and services available through Rainforest Alliance's SmartWood program. SmartWood also works on a region-specific basis in collaboration with various other independent, nonprofit organizations that focus on forest monitoring, evaluations, assessments, and forest product certification in tropical, temperate, and far northern regions. Through certification, and use of the SmartWood label, the program provides a commercial incentive for forest managers to adopt sustainable forestry practices.

² <http://www.smartwood.org/>

SmartWood certifies forest products that come from "well-managed" forests ("sources"). Candidate sources may include a natural forest, a plantation, a large commercial operation or a small-scale community project. SmartWood also certifies companies that process, manufacture or sell products made from certified wood, through "chain of custody" certification. In short, certification:

- Ensures that timber harvesting is ecologically sound, and socially and economically beneficial to local communities
- Creates market incentives for producers to responsibly manage forests and harvest timber
- Gives consumers the power to positively "vote" for conservation when they buy certified wood products
- Contributes to the preservation of forests and forest wildlife worldwide

SmartWood serves as an internationally recognized clearinghouse for information on sustainable forest management and certified wood products. Public information is sent daily in response to requests from consumers, architects/designers, manufacturers, woodworkers, builders and municipal governments. Available information includes: the program description, brochures and sales sheets, certification guidelines, application forms, and publications on certification.

The SmartWood Certification Process

Eligibility

SmartWood focuses on the certification of medium and large operations, targeting forest management and chain-of-custody certifications of influential companies. With industry leaders paving the way, smaller operations are likely to follow their example and embrace certification. The Rainforest Alliance's recently created TREES initiative will provide assistance to small landowners, and community and indigenous groups worldwide so that they can benefit from forestry certification, and, by doing so, expand the marketplace for certified timber and timber products. SmartWood certification is voluntary. All producers of timber or non-timber forest products and companies processing or selling forest products from certified sources are eligible to apply for certification.

Criteria for Source Certification

SmartWood certification of forest "sources" is based on field review using SmartWood's generic guidelines, or, when available, country or bioregional guidelines which have been drafted in consultation with local experts and organizations, often in collaboration with the Forest Stewardship Council (FSC). SmartWood has been involved in the development of draft regional certification standards throughout the world. In all cases these guidelines have been developed with help from stakeholders in each region, including the general public, local

communities, professional foresters, ecologists and social scientists. The guidelines are widely and publicly circulated for comment, and are periodically revised based on comments received.

Forest management certification evaluates the practices of forest managers according to environmental, silvicultural, and social standards. If these standards are met, an operation is certified, and timber (or other non-timber forest products) harvested from that forest may be sold as SmartWood and FSC certified. In general, candidate operations must meet the following broad principles:

- long-term security for the forest (i.e., it will not be cleared in the foreseeable future);
- maintenance of environmental functions, including watershed stability and biological conservation;
- sustained yield forestry production;
- positive impact on local communities; and,
- the existence of a system for long-term forest management planning, management and monitoring (including a written forest management plan).

In the case of plantations, SmartWood does not endorse the conversion of standing forests to tree plantations, but will certify those that have been developed on previously deforested lands and/or that are a first step towards forest restoration.

SmartWood sees this as a means to restore tree cover, protect soils and watersheds, and reduce pressure on natural forests. More specific opportunities for, or limitations on, plantation certification will be determined by regional conditions. Multi-species plantings are encouraged along with other reforestation practices that yield strong environmental and social or community benefits.

Criteria for Chain of Custody Certification

Certification of companies marketing SmartWood products (e.g., wholesalers, processors, retailers, brokers, etc...) is granted after chain-of-custody audits confirm that certified wood is being used in certified product lines. The SmartWoodCM name, logo and certification mark are the property of the Rainforest Alliance; their use for marketing and advertising purposes must be certified, licensed or authorized by the Rainforest Alliance.

Categories of Source Certification

SmartWood sources are certified according to how closely they adhere to SmartWood principles and guidelines. Sources operating in very strict adherence to these principles, and having long-term data to support this, will be classified as "sustainable". Sources that can demonstrate a strong operational commitment to the principles and guidelines will be classified as "well managed".

Categories of Chain of Custody Certification

Chain-of-custody certification assures consumers that the certified items they buy were produced with certified wood or other certified non-timber forest products. Currently, SmartWood has certified the production of products ranging from guitars to furniture. SmartWood companies are chain of custody-certified according to whether all or some of their wood products come from certified SmartWood sources. An "Exclusive" SmartWood company sells forestry products made only from wood from SmartWood or other FSC-endorsed, certified sources. A "Non-Exclusive" SmartWood company sells products from both SmartWood or other FSC-endorsed certified sources and other non-certified origins. We encourage "Non-Exclusive" companies to become "Exclusive" as quickly as possible.

Costs

Certified sources and companies are required to pay an annual SmartWood program fee, plus all costs incurred in the performance of field assessments or on-site audits. All payments made to SmartWood are solely for the purpose of covering program costs. Late payments may be subject to service charges and parties that fail to make their payments to SmartWood will be terminated from the program with six weeks notice. An up-to-date schedule of the estimated costs of certification, depending on the size and complexity of an operation, can be obtained through SmartWood headquarters or regional SmartWood representatives.

Evaluation/Audit Process

When a potential SmartWood source or company first applies, SmartWood determines whether to proceed with a full assessment based on discussions with the applicant, document exchanges, and other information. Source assessments are typically conducted by a 3-person interdisciplinary team comprised of a forester, an ecologist and a social scientist. SmartWood staff and local field agents conduct the assessments. These assessments can last up to two weeks, followed by time for report writing and processing. During the evaluation, the team visits field sites, meets with operation managers, and interviews other interested parties such as employees, community members, environmental groups and government forestry officials. Field reports are reviewed by members of an independent panel. After input from review panel members, SmartWood makes a final decision regarding certification. All certified SmartWood sources and companies are subject to annual field audits in order to maintain certification. All information is held in strict confidentiality.

These standards are highly specific and technical and generally categorized as forest management and chain of custody. The forest management guidelines are expanded upon further in the form of a resource manager addendum which is only used when a forestry operation under evaluation includes plantations or

management of forests owned by someone else (i.e. consulting forestry, land cooperatives, etc.)

In general they aim to ensure that forestry operations:

- Develop a formal plan to ensure good, long-term forest management
- Minimize the damage they do to remaining forest during harvesting
- Protect local biodiversity and watersheds
- Prevent over-cutting of popular timber species
- Develop positive relationships with local communities and workers
- Plant trees on degraded or cleared land (with an emphasis on native species and ecosystem restoration)

The standards also require companies selling or using certified wood to prove that all wood sold as "SmartWood" does indeed come from certified sources. To keep their certification, companies must prove annually that they continue to meet standards. Companies that sell or use certified wood to make finished products such as furniture may also be certified. Once approved, companies are able to use SmartWood's distinctive seal or mention the Program in their public information or marketing efforts.

Scientific Certification Systems (SCS) is a neutral, third-party testing and certification organization evaluating a wide variety of food safety and environmental claims.

Using analytical scientific tools and techniques, our efforts are geared toward recognizing companies and organizations whose products and services meet the highest food safety and environmental standards. Independent certification by SCS gives companies an edge in the marketplace by highlighting their outstanding achievements. Certification likewise gives consumers, retail and business customers, and government and institutional purchasing agents the information they need to make the best informed choices.

In addition to certification, SCS evaluation and consulting services help companies and individuals identify the most effective strategies for achieving their environmental and food safety objectives, and benchmark on-going performance.

Forest Conservation Program

Since its inception in 1991, the SCS Forest Conservation Program (FCP) has certified more than 4.8 million acres of forestland in the United States through the Forest Management Certification Program. In addition, SCS has certified more than 10.7 million acres of forests throughout the world.

In its Chain of Custody Program, SCS has audited and certified over 220 manufacturers, distributors and retailers who make or carry certified wood products.

SCS is accredited by the Forest Stewardship Council (FSC), an international body that evaluates, accredits and monitors independent forest product certifiers.

Chain of Custody Certification

Before a product may carry a Forest Stewardship Council (FSC) or SCS label, all stages of the production, distribution and sale of the product must be independently certified. Wood must be tracked from the certified forest to the finished product.

Through its Chain-of-Custody Program, Scientific Certification Systems (SCS) certifies wholesalers, manufacturers, distributors, and retailers who handle wood from forests certified according to FSC standards. To become certified, these enterprises must maintain adequate inventory control systems to allow for separation and identification of certified product.

SCS requires the tracking of certified products throughout the production process to ensure the validity of the certified claim. If a wood product carries the FSC logo as

certified by SCS, a customer can have confidence that it was made from wood harvested from an FSC-certified forest.

Forest Management Overview

How does a forestry company communicate to customers that the harvest of its wood products is sustainable, is not contributing to the degradation of forest ecosystems or displacing indigenous populations?

The best way to get this message to buyers is through an independent, third-party evaluation and certification of the forestland's management. The certified product's label tells the story of a well-managed forest and the care taken to ensure the authenticity of a certified claim. Scientific Certification Systems (SCS), accredited by the Forest Stewardship Council (FSC) audits and certifies forestlands that are judged to be well-managed according to the Principles and Criteria of the international FSC.

SCS also issues Chain-of-Custody certifications to wholesalers, manufacturers, distributors and retailers who handle certified forest products from woods to market. By obtaining certification, producers and sellers of wood products can demonstrate to their customers that they are committed to protecting the world's forests for future generations while bringing a quality product to the marketplace.

SFI³



Adopted by the American Forest & Paper Association (AF&PA) in October 1994 and officially launched in 1995, The Sustainable Forestry Initiative® (SFI) program is an exacting standard of environmental principles, objectives and performance measures that integrates the perpetual growing and harvesting of trees with the protection of wildlife, plants, soil and water quality and a wide range of other conservation goals. An independent External Review Panel, comprised of representatives from the environmental, professional, conservation, academic and public sectors reviews the program and advises AF&PA on its progress. Through the SFISM program, members of the American Forest & Paper Association are revolutionizing the way that private forests are managed in the U.S. Sixteen member companies have been expelled from the Association for failure to uphold the standard set by the SFISM program.

Sustainable Forestry Board

The Sustainable Forestry Board was chartered as an independent body in July of 2000 to oversee development and continuous improvement of the Sustainable Forestry Initiative® (SFI) Program Standard, associated certification processes and procedures and program quality control mechanisms.

External Review Panel (ERP)

A distinguished group of 18 independent experts representing conservation, environmental, professional, academic, and public organizations comprise the Independent External Review Panel. The mission of the External Review Panel is to provide a framework to conduct an independent review of the SFISM program and to ensure the Annual Report fairly states the status of SFISM program implementation. The volunteer Panel provides external oversight with their independent review of the current SFISM program while seeking steady improvements in sustainable forestry practices. While some members of the panel do make field visits to member companies and observe their on-the-ground practices, it is not a charge of the panel

³ <http://www.afandpa.org/>

to verify practices on the ground and the panel does not review individual company data.

Green Tag⁴

Background

Green Tag Forestry is a “third-party” certification that was developed by the National Forestry Association in cooperation with the Association of Consulting Foresters and the National Woodland Owners Association. It is national in scope and the only program that is intended solely for use by private forest landowners. The program complements those sponsored by American Tree Farm and Forest Stewardship Council. It is also similar in some respects to the forest industry’s Sustainable Forestry Initiative and State/Federal Forest Stewardship Incentive Programs.

A Green Tag Forest is a woodland whose stewardship has been certified as incorporating good forestry practices that assure a balance of natural diversity and sustainable forest productivity. Green Tag certification is available in all fifty states. The program provides recognition to landowners who practice responsible and sustainable woodland stewardship. This recognition may bring a market premium as a “green-certified” forest product.

Guiding Principles

Green Tag Forestry has ten criteria that outline its approach to forest management. There are forty-six indicators that define successful conformance within each criteria. A general summary of the ten criteria and their indicators follows:

1) Forest Planning and Management

- Written, ten-year management plan is in place, documented and updated periodically;
- Landowner holds clear title and has considered easements;
- Property boundaries are known and clearly marked;
- Professional forestry advise (private and/or public) has been identified and obtained
- Clear commitment to stewardship has been demonstrated;
- Contractors (logging, road, others) are informed of forestry plan and/or goals;

⁴ <http://www.woodlandowners.org/greentag/greentag.asp>

2) Forest Health, Inventory and Natural Diversity

- Complete and current forest inventory on record, including, reference to health and condition of forest, significant flora and fauna, and adequate data/mapping;
- Compliance with all applicable federal, state and local regulations and zoning laws;
- Soils, site productivity, slope and water retention have been considered;
- Special attention has been given to rare or endangered species, if present;
- Silvicultural practices are designed to discourage forest insects and disease;
- Continuous stand improvement recommendations are developed and implemented

3) Logging, Post-Harvest Evaluation and Reforestation

- Harvesting system described and in place;
- Use of trained and/or certified loggers;
- Use of professional or representative to oversee harvest and final inspection;
- Post-harvest site evaluation between one and three years following harvest;
- Soil disturbance and residual stand damage is minimized during harvest operations;
- Site is regenerated in two years or less of harvest

4) Road Construction, Stream Crossings, Protection of Special Sites

- Roads are planned and constructed with intent of minimizing loss of productive land without degrading non-forest areas;
- Landowner familiar with and implements Best Management Practices (BMPs);
- Roads and landings are “put to bed” with drainage and seeding;
- Properly sized culverts are used;
- Stream bank grades are rocked;
- Wetlands, key habitats, rare plants and other special sites are identified and protected;

5) Product Utilization and Aesthetics

- Efforts are made to achieve good utilization;
- Carrying capacity and production goals are balanced;
- Saw log harvests are complemented with pulpwood and chipwood removals as appropriate;
- Residual materials are either laid down or chipped;
- Allowances have been made for vistas and appearance;
- Clearcuts are used only when it is the most appropriate silvicultural practice, and are limited to 80 acres or less;
- Recreation and wildlife trails and waterways are free of debris

6) Chemical Utilization

- Chemicals are used sparingly and manufacturer's guidelines are followed;
- Compliance with all state and federal regulations;
- Records of chemical applications are maintained;

7) Community and Social Relations

- Recognition given to public interests (clean water, wildlife habitat, clean air, forest products, jobs);
- Management plan/objectives discussed with adjacent landowners;
- Communication and participation, as appropriate, with public, forestry, landowner and community organizations;
- Respect of Native American, cultural and historical sites, if present

8) Economic Viability

- Understanding of timber tax, land tax, accounting, records, and forestry practices;
- Income from alternative forest products has been considered;
- Balance between productivity and natural diversity has been recognized

9) Record Keeping and Tracking

- Records are maintained, reviewed, reconciled and updated regularly;
- Records confirm that harvest and silvicultural activities meet management plan objectives;

10) Commitment to Sustainability

- Sustained yield forestry concepts are followed (i.e. growth exceeds harvest over time);
- Landowner accepts responsibility as the ultimate steward of the land;
- Participation in programs fostering sustainability

Costs and Restrictions

There is a one-time \$150 registration fee payable to the National Forestry Association. Site inspection fees range from \$.10 to \$1.25 per acre depending on size of property and completeness of management plan and other records. Small tracts (20-75 acres) may cost more. Estimates are provided prior to conducting a site visit. Program participants must maintain active membership in the National Woodland Owners Association.

Verification Process

Green Tag Forestry is a second-party certification system that uses third-party verification (much like the American Tree Farm System). The rules are set by an executive board and the process does not include participation of a wide set of stakeholders. The certification (verification) process relies on an independent third-party forester to assess the property and management activities.

The certification (verification) process begins with an application to the National Forestry Association. A field examination is then conducted by an individual forester (auditor).

Failure to comply with the program will result in the withdrawal of certification. Certifications are good for five years. Re-verification (re-authorization) is available by application.

SOIL AND WATER	Evaluation	
1) Followed current best management practices (BMPs) to protect soil and water quality.	1 2 3 N/A	
2) Maintained streamside management zones along streams.	1 2 3 N/A	
3) Maintained and protected all jurisdictional wetlands.	1 2 3 N/A	
4) Maintained cover on highly erodible lands.	1 2 3 N/A	
5) Significant accomplishments in the rehabilitation and stabilization of critical areas and roads.	1 2 3 N/A	
COMMENTS:		

WILDLIFE Evaluation*	RECREATION	Evaluation*
1) Habitat created, improved, or maintained for desired species. List species in comments. 1 2 3 N/A	1) Actual recreational use of property.	1 2 3 N/A
3) If hunting occurs on property, species adequately harvested to prevent over population and habitat damage. 1 2 3 N/A	2) Recreational use specified and management plan followed.	1 2 3 N/A
4) Other resources managed to enhance desired wildlife species. 1 2 3 N/A	3) Recreational opportunities must be actively maintained, retained or created List in comments.	1 2 3 N/A
COMMENTS:	4) When hunting is the recreational use, does property show evidence of enhanced hunting opportunities beyond wildlife management activities (i.e. blinds, stands, access)	

Appendix C.

1. Please use the following tables to rate individual plan elements as they compare with plans that have met the standards of your organization.

Information Elements

Element	Highly Favorable	Favorable	Adequate	Unfavorable	Highly Unfavorable	Cannot Assess
General Information						
Forest Security						
Management Plans						
Management History						
Harvest Levels						

Element	Highly Favorable	Favorable	Adequate	Unfavorable	Highly Unfavorable	Cannot Assess
Sustained Yield M t.						
Annual Harvest Plans						
Harvesting Guidelines						
Felling Guidelines						
Clearcutting Guidelines						
Road Guidelines						
Skidding Guidelines						
Post-harvest Assessment						
Reforestation Guidelines						
Water Quality						
Chemical Guidelines						
Fire/Insects Disease						

Research Instrument

Timber Management Elements

Environmental Elements

Element	Highly Favorable	Favorable	Adequate	Unfavorable	Highly Unfavorable	Cannot Assess
Long-term Productivity						
Non-Timber Products						
Basal Area Retention						
Rotation-age Guidelines						
Fragmentation Guidelines						
Biological Resources						
T&E Species Protection						
Biological Diversity						
Wildlife and Fisheries						
Species Conversions						
Soil Conservation						
Protected Zones						

2. Overall, how does this plan compare with plans for other NIPF tracts that have met your organization's standards for sustainable forest management?

Highly favorable

Favorable

Adequate

Unfavorable

Highly Unfavorable

3. If rated unfavorable or highly unfavorable, what changes could be made to raise its rating?

4. If you inspected this property and found that the plan is being followed by the landowner, what do you estimate its chances of receiving recognition by your organization?

Highly likely

Likely

Possible

Unlikely

Highly Unlikely

Please feel free to add any additional comments you may have in the space below.

Appendix D.



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Review of Forest Management Plans – SFI and FSC

Our capability....

Established in 1987, Forme Consulting Group Ltd is one of New Zealand's leading International forest industry consulting. Forme has a large and diverse client base spread throughout the country including all major NZ forest owners plus wood processors and investors through to farm foresters. The most up to date forestry and business planning and analytical software plus Forme's extensive in-house information database is available to clients. Access to international market and wood resource information is regularly maintained through close linkages with US consulting firm Wood Resources International Ltd.

Forme Consulting Group is a private company, with 3 shareholder/directors and 3 full time staff. Other specialist staff are engaged on a sub-contract basis to assist with projects.

Forme's core specialist services are:

- **Performance Improvement** – process simulation modeling, management systems, quality, productivity, business performance assessment, benchmarking.
- **Independent audits** & reviews of forest management.
- **Technical forestry** & investment - acquisitions, planning, portfolio analysis, management planning.

- **Environmental systems**, consulting and certification – ISO, FSC, SFI, VEP
- **Training & education** to unit standards.

We also provide a wider range of services including feasibility studies, forest assessments, valuations, supply chain modeling, forest management practice reviews, strategic planning, harvest planning and human resource management.

Forme conducts audits to FSC and ISO 14001 on a sub-contract to SGS, an international certification company based in the United Kingdom. Two of Forme's staff are FSC auditors and one is a registered lead auditor.

Forme has conducted numerous desktop assessments of management plans against the FSC principles and criteria as well as the New Zealand forestry performance standard (VEP). Forme has a detailed knowledge of the SFI requirements as has a capability to review plans against this standard. Jon Dey in particular has an in-depth knowledge of SFI and its requirements for US forest products companies.

We believe Forme has the necessary credibility to conduct this project.

References....

David Hilliard – Chief Executive – Timberlands West Coast Ltd; Ph ++643 762 6111

James Griffiths – Chief Executive – NZ Forest Industries Council; Ph ++644 473 9220

Alberto Goetzl – AF&PA – Ph 203 463 2700

Appendix E.

Tree Farm⁵

The Tree Farm System mission is:

to promote the growing of renewable forest resources on private lands while protecting environmental benefits and increasing public understanding of all benefits of productive forestry.

The Tree Farm System provides conservation education to non-industrial private forestland owners in the United States. Currently, there are approximately 9.9 million private landowners who own more than 57% of the forested land in the United States. The Tree Farm System goal is to reach out to these landowners and assist them in managing their forests sustainably. These individuals hold the key to what kind of forests, forest activities and forest resources future generations of Americans will enjoy.

The American Tree Farm System has approximately 65,000 Tree Farms totalling almost 26 million acres of non-industrial private forestland certified in the program in 48 states. For 60 years now, since 1941, Tree Farm has recognized landowners for their commitment to sustainable forest management. Tree Farmers share a unique commitment to protecting watersheds and wildlife habitat, to conserving soil and providing recreation for their neighbors and, at the same time, to producing the wood America needs to grow. Tree Farmers must meet our standards and guidelines to belong. To certify forestland, a forest owner must develop a written management plan based on strict environmental standards and guidelines and pass an inspection by one of our 7,000 volunteer foresters who donate their expertise to our program. The system's volunteer foresters reinspect Tree Farms every five years to verify adherence to Tree Farms's sustainable forest management standards and guidelines.

Contact the State Committee in the state where your farm is located to schedule an initial interview or to request more information.

The American Tree Farm System is sponsored nationally by the American Forest Foundation

⁵ <http://www.treefarmssystem.org/>

**The American Forest Foundation
Standards, Guidelines and Performance Measures For
Tree Farm System Member Certification**

The American Tree Farm System certifies its members as meeting the standards and guidelines of sustainable forest management established by the American Forest Foundation.

**American Forest Foundation
American Tree Farm System**

Standards & Guidelines for Forest Landowners
Performance Measures for Tree Farm Certification

Ensuring Sustainable Forests

Members of the American Tree Farm System promote the growing of renewable forest resources on their forest land while protecting environmental benefits and are encouraged to strive to increase public understanding of all benefits of productive forestry.

Ensuring Sustainable Forests

Performance Measures:

To achieve and maintain certification, all members must have a written and active forest management plan. This plan must take into consideration maintenance and/or enhancement of wood and fiber production, wildlife habitat, water quality and recreational opportunities

Reforestation

Members must provide for prompt restocking of desired species of trees on harvested areas and idle areas where tree growing is the land use objective. This may be accomplished by natural seeding; sprouting; direct seeding; or reforestation with tree seedlings.

Reforestation

Performance Measures:

To achieve and maintain certification, members must achieve satisfactory restocking levels within five years following harvest, or less if specified by state or local ordinance. Acreage not reforested because of change of use shall be deducted from overall Tree Farm acreage.

Water Quality

Forestry practices must include the application of the state's Environmental Protection Agency (EPA)-approved forestry Best Management Practices (BMPs) or forest practices act as well as any other practices required by local, state or federal regulations.

Water Quality

Performance Measures:

To achieve and maintain certification, members must be in compliance with state Forestry Best Management Practices (BMPs) or their forest practices act to assure water quality standards are met.

Wildlife Habitat

Members' forest management plans must address the effects of forest practices on fish and wildlife.

Wildlife Habitat

Performance Measures:

To achieve and maintain certification, members shall follow forest practices, that to the extent practicable, protect and enhance fish and wildlife habitat, while considering floral and faunal diversity.

Forest Aesthetics

Members shall follow forest practices that consider the aesthetic effects of forest activities.

Forest Aesthetics

Performance Measures:

To achieve and maintain certification, members shall, to the extent practicable, follow forest management practices that demonstrate concern for visual impacts.

Protect Special Sites

Implemented forest management practices shall, to the extent practicable, recognize and protect recreational, historical, biological, archaeological and geological sites of special interest.

Protect Special Sites

Performance Measures:

To achieve and maintain certification, forest management practices, to the extent practicable, shall demonstrate concern for special sites.

Biodiversity

Acceptable forest management includes the range of even and/or uneven age management practices.

Biodiversity

Performance Measures:

To achieve and maintain certification, members shall implement forest management practices that enhance the health and productivity of the woodland, while considering biodiversity on a landscape or watershed scale.

Slash Disposal and Utilization

Members shall consider harvest contract wording that addresses utilization and slash hazard reduction.

Slash Disposal and Utilization

Performance Measures:

To achieve and maintain certification, members shall make a good faith effort to utilize, in an environmentally and/or economically sound manner, all severed and/or damaged materials on a harvest site.

Prudent Use of Chemicals

Forest management practices using herbicides, pesticides and/or fertilizers and implemented by the landowner shall be of the type that maintain or enhance the health and productivity of the woodland while protecting soil, water, fish and wildlife resources.

Prudent Use of Chemicals

Performance Measures:

To achieve and maintain certification the use of herbicides, pesticides and/or fertilizers must meet or exceed all applicable label requirements as well as all local, state and federal laws.

Forestry Contractor Use

The Tree Farm Program provides information, education and assistance to forest landowners regarding forest management practices that will sustain or enhance forest productivity, wildlife habitat, water quality and outdoor recreation.

Forestry Contractor Use

Performance Measures:

To achieve and maintain certification, members shall make a good faith effort to ensure that loggers and contractors working on their property are made aware of special requirements. In addition, members are encouraged to contract with loggers and other forest management contractors who have completed recommended training and education programs offered for their profession in their respective states and that such contractors are insured and comply with all state and federal regulations.