

# Maryland DNR Forest Service

Tawes Building, 580 Taylor Avenue  
Annapolis State Maryland 21401

SFI 2015-2019 Standards and Rules®, Section 2 – Forest Management

Surveillance Audit



**NSF International**

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## NSF International Forestry Program Audit Report

**A. Certificate Holder**

Maryland DNR Forest Service

**NSF Customer Number**

0Y301

**Contact Information (Name, Title, Phone & Email)**

Jack Perdue  
Forest Resource Planning  
Maryland Forest Service  
Department of Natural Resources  
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Annapolis, Maryland 21401  
[410-260-8505](tel:410-260-8505) (office)  
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**B. Scope of Certification**

The forest management program of the Maryland Department of Natural Resources on the following Maryland State Forests: Chesapeake Forest Lands, Pocomoke State Forest, Green Ridge State Forest, Garrett State Forest, Potomac State Forest, and the Savage River State Forest. The SFI Certificate Number is NSF-SFI-FS-0Y301.

**Locations Included in the Certification**

Chesapeake Forest Lands  
Pocomoke State Forest  
Green Ridge State Forest  
Garrett State Forest  
Potomac State Forest  
Savage River State Forest

**C. Audit Team**

Mike Ferrucci, NSF Lead Auditor

**Audit Date(s) (If multiple locations were audited, indicate the date of each site visit)**

April 24–26, 2018

**D. Significant Changes to Operations or to the Standard**

None

**E. Audit Results**

- No nonconformities or opportunities for improvement were identified.
- There were   3   opportunities for improvement identified. Summary:  
Management plans could be improved regarding accurately describing the status (ongoing vs. completed) of selected activities; Use of the trademark symbol (™) is recommended in all documents when first using the initials SFI; and there are opportunities to improve the awareness of predicted climate change patterns and the impacts to wildlife and biodiversity.

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Issues identified at previous audits reviewed for continued conformance. Summary:

1. In the FY2017 Annual Work Plans (AWP) for western State Forests the Ecologically Significant Area (ESA) Plans had not been completed. (SFI 2015-2019 Standards and Rules®, Section 2 – Forest Management, Indicator 1.1.1 i). The program has addressed issues related to the portions of management plans covering Environmentally Sensitive Areas.
2. On the Maryland DNR Forest Service website, the words “Sustainable Forestry Initiative” did not include the registered trademark - ®. (SFI 2015-2019 Standards and Rules®, Section 5 Part 4, Indicator 4.2). Trademark Use on the program’s web-site is now in conformance.

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Yes     No     N/A (not using)    All logos and/or labels, including ANSI, ANAB, SFI, PEFC, ATFS, etc., are utilized correctly in accordance with NSF SOP 14680 and SOP 4876. If answering “No”, a finding of nonconformity should be issued.

Answer:    There are no labels used, and logo use is following requirements except as noted above.

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## F.    **Appendices**

- Appendix 1:    Audit Notification Letter and Audit Agenda
- Appendix 2:    SFI Forest Management Public Summary Report
- Appendix 3:    Audit Standard Checklist - SFI Forest Management Standard
- Appendix 4:    Site Visit Notes
- Appendix 5:    Meeting Attendance
- Appendix 6:    Multi-site Checklist



**Appendix 1**

**Audit Notification Letter and Audit Agenda**

April 10, 2018

**Re: Confirmation of SFI<sup>®</sup> Surveillance Audit, Maryland Forest Service**

Jack Perdue, Maryland DNR Forest Service  
580 Taylor Avenue  
Annapolis, MD 21401

Dear Mr. Perdue

We are scheduled to conduct the 2018 FSC<sup>®</sup> and SFI<sup>®</sup> Surveillance Audits of Maryland's state forest system the week of April 23. This letter provides the SFI audit plan; the FSC audit plan has been provided by Beth Jacquain, SCS Lead Auditor.

The 2018 SFI Audit is a partial review of your SFI Program to confirm that it continues to be in conformance with the SFI 2015-2019 Forest Management Standard and that continual improvement is being made. It also includes an assessment of your program against the new.

The scope statement (appearing on your certificate) is as follows:

The forest management program of the Maryland Department of Natural Resources on the following Maryland State Forests: Chesapeake Forest Lands, Pocomoke State Forest, Green Ridge State Forest, Garrett State Forest, Potomac State Forest, and the Savage River State Forest. The SFI Certificate Number is NSF-SFI-FS-0Y301.

The audits will commence with an opening meeting on April 24 at 8 am at the New Germany State Park. The closing meeting will occur on Thursday April 26, 2015 from 2:30 to 3:30 pm at the Green Ridge S.F. office. The proposed schedule is outlined below:

**April 24- Tuesday: Potomac-Garret State Forest**

*(~10 minute drive from hotel to New Germany State Park; 40 minutes to PGSF)*

- 7 am: (optional) breakfast at the auditor's hotel in location;
- 8-10:30 am, New Germany State Park: Opening Meeting: Review 2017 CARs, program changes, audit plan; Review of central office programs/administration; Presentations
- 11:30 am to 5 pm, Potomac-Garret State Forest: field visits; 5 pm daily briefing;
- Optional dinner at 6:30 pm.

**April 25 - Wednesday: Savage River State Forest**

*(~short drive from hotel to state forest office)*

- 8:30 am to 4 pm Savage River State Forest office and field audits;
- 4:30 pm daily briefing
- Optional dinner at 6:30 pm.

## April 26 - Thursday: Green Ridge State Forest

(~45 minute drive from hotel to state forest office)

- 7 am: (auditors and Maryland staff who are staying at hotel) breakfast meeting to consider issues and adjust schedule if needed
- 8:30 am to 1:30 pm Green Ridge State Forest office and field audits
- 1:30-2:30 pm Auditors prepare for closing meeting (location Green Ridge S.F. office)
- 2:30 pm Closing Meetings (Green Ridge office)
- 2 hour travel time from closing meeting location to BWI Airport
- Mike Ferrucci: 7:50 pm flight; Beth Jacqmain: hotel; morning flight

The above tentative schedule outlines the broad flow of the audit process during this visit. The schedule can be adapted either in advance or on-site to accommodate any special circumstances. Your managers should prepare more-detailed daily itineraries that allow for up to one hour of background information and discussion in the appropriate office regarding each forest assessed. As during the previous audits please arrange field lunches to expedite the process.

The field visits will be conducted by a joint field team: Beth Jacqmain will audit with an FSC-focus (but she will assess some elements of the SFI Standard); I will audit with an SFI-focus (but some elements of FSC will be included in my work). Bios for each of the audit team members are provided as attachments.

During the SFI part of the audit I will:

1. Review progress on achieving SFI objectives and performance measures and the results of the management review of your SFI Program;
2. Review selected components of your SFI program, with a focus on the following requirements (as well as any requirement pertaining to field sites that are selected for review):
  - Objective 1: Forest Management Planning
  - Objectives 2, 3, 5, and 7: Health, Productivity, Water Resources, Visual, Utilization (mostly field-oriented)
  - Objective 10: Forestry Research, Science & Technology
  - Performance Measure 11.2 (support for logger training); and
  - Objective 14: Communications and Public Reporting;
  - Objective 15: Management Review & Continual Improvement;

### **Please assemble office evidence needed to confirm conformance to these requirements.**

3. Verify continued effective implementation of corrective action plans from recent previous NSF audits;
4. Review logo and/or label use;
5. Confirm public availability of summary reports;
6. Evaluate the effectiveness of planned activities aimed at continual improvement of your SFI Program; and
7. Evaluate the multi-site requirements.

### **Multi-Site Sampling Plan:**

Your responsibilities for Public Lands Stewardship include the role of “central administration” for this multi-site program. I plan on reviewing the SFI multi-site requirements following the opening meeting on the first day of the audit.

The following sites are included in the overall scope: Chesapeake Forest Lands, Pocomoke State Forest, Green Ridge State Forest, Garrett State Forest, Potomac State Forest, and the Savage River State Forest. The 2018 audit will include 4 of these 6, all in western Maryland, as follows: Green Ridge State Forest, Potomac State Forest, Garrett State Forest, and the Savage River State Forest. These forests were selected to include a broad cross-section of activities and of the sites and to facilitate travel. Random sampling was not employed in the selection of these 4 forests but will be used in the selection of sites to be visited.



**Field Site Selections**

Please provide a list of management activities for the forests being audited this year. The lists should be as comprehensive as possible, covering recently completed, ongoing, and planned harvests at a minimum. Please also include lists of other management activities (road building, site-preparation, planting, TSI or release for example) in cases where compiling such lists will not be unduly time-consuming. The two lead auditors will make preliminary random selections from these lists. We will then ask your forest managers to prepare suggested daily itineraries which include our primary selections supplemented by sites which are proximate or which combine into efficient travel routes.

We will need to complete the preliminary selections at least one week before the start of the audits to allow your managers time to prepare their daily itineraries.

I look forward to visiting you and evaluating continual improvement in your SFI Program. If you have any questions regarding this planned audit, please contact me.

Best Regards,

Mike Ferrucci, Lead Auditor, NSF  
203-887-9248 mferrucci@iforest.com

Attachments:

Audit Visit Record

Mike Ferrucci's short bio

Beth Jacqmain's short bio

**Audit Visit Record**

Registration / Reassessment	Surveillance 1	Surveillance 2	Surveillance 3	Surveillance 4
Date(s)	Dates	Dates	Dates	Dates
April 7-11, 2014	April 7-9, 2015	April 26-28, 2016	April 24-27, 2017	April 24-26, 2018
Sites visited	Sites visited	Sites visited	Sites visited	Sites visited
	Chesapeake Forest Lands, Garrett State Forest, Green Ridge State Forest	Green Ridge State Forest, Garrett State Forest, Savage River	Chesapeake State Forest, Pocomoke State Forest	Green Ridge State Forest, Garrett State Forest, Savage River SF

## **Mike Ferrucci, SFI and FSC Forestry and Chain of Custody Lead Auditor/Consultant**

Mike Ferrucci is qualified as a RAB-QSA Lead Auditor (ISO 14001 Environmental Management Systems), as an SFI Lead Auditor for Forest Management, Procurement, and Chain of Custody, as an FSC Lead Auditor Forest Management and Chain of Custody, as a Tree Farm Group Certification Lead Auditor, and as a GHG Lead Auditor. Mike has led Sustainable Forest Initiative (SFI) certification and precertification reviews throughout the United States. He has also led or participated in joint SFI and Forest Stewardship Council (FSC) certification projects in nearly one dozen states and a joint scoping or precertification gap-analysis project on tribal lands throughout the United States. He also co-led the pioneering pilot dual evaluation of the Lakeview Stewardship Unit on the Fremont-Winema National Forest.

For 12 years Mike was the SFI Program Manager for NSF – International Strategic Registrations responsible for all aspects of the firm’s SFI Certification programs. In that role Mike developed and managed one of the largest forest and chain of custody certification programs in the U.S.

Mike has conducted Chain of Custody audits for all segments of the forest products industry, including printers, corrugated and box producers, integrated paper companies, paper distributors, solid wood mills, engineered wood products facilities, brokers, and distributors. In audits with pulp mills, corrugated producers, and box plants Mike has addressed the issues involving recycled content. Mike has also conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 33 states.

Mike Ferrucci has 37 years of forest management experience. His expertise is in sustainable forest management planning; in certification of forests as sustainably managed; in the application of easements for large-scale working forests, and in the ecology, silviculture, and management of mixed species forests, with an emphasis on regeneration and management of native hardwood species. Mike has conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 34 states. Mike has been a member of the Society of American Foresters for over forty years. He is Past Chair of the SFI Auditor’s Forum. Mike is also a Lecturer at the Yale School of Forestry and Environmental Studies, where he has taught graduate courses and workshops in forest management, harvesting operations, professional forest ethics, private forestry, and financial analysis.

## **Beth Jacqmain, FSC Lead Auditor**

Beth Jacqmain is a Certification Forester with SCS Global Services. MS Forest Biology/Ecology from Auburn University, Alabama and BS Forest Management from Michigan State University. Beth has 20+ years’ experience in the forestry field including public land management, private consulting, and private corporate. Qualified ANSI RAB accredited ISO 14001 EMS Lead Auditor and a qualified FSC Lead Auditor for Forest Management/Chain of Custody. Audited and led FSC certification and precertification evaluations, harvest and logging operations certification evaluations, and has participated in joint PEFC and American Tree Farm certifications. A 9 year member of the Forest Guild, 20 year adjunct-Faculty with Itasca Community College, Natural Resources Department. Jacqmain’s experience is in forest management and ecology; ecosystem silviculture; the use of silviculture towards meeting strategic and tactical goals; tree regeneration; forest timber quality improvement, conifer thinning operations, pine restoration, and fire ecology in conifer dominated systems. Beth has experience in forest ecology and management in the Midwest, Pacific Northwest, and the Southeastern US.

## Appendix 2

# Maryland DNR Forest Service 2018 SFI<sup>®</sup> Forest Management Summary Report

## Introduction

The SFI Program of the Maryland DNR Forest Service of Annapolis, Maryland has achieved continuing conformance with the SFI<sup>®</sup> 2015-2019 Forest Management Standard, including the sustainable harvest level requirement (Performance Measure 1.1), according to the NSF SFI-FS Certification Audit Process.

The Maryland DNR Forest Service initially obtained SFI Certification from NSF on July 24, 2003 and the program was re-certified in July 2006. Initially only the Chesapeake Forest Lands were certified, with the Pocomoke State Forest added in 2009 as part of an expansion of scope that included other recently acquired lands. In 2011 the organization sought and was granted recertification to the current scope based on an audit of the six largest state forests against the SFI 2010-2014 Standard. The state forests included in the current scope were re-certified to the SFI 2015-2019 Standards in April of 2014. The most recent audit was a surveillance audit in April 2018.

Maryland DNR Forest Service has an extensive program for harvest planning and approval. A Sustainable Forest Management Plan has been developed for each forest, and these plans are regularly updated. Harvests levels have been modeled by forest type for sustainability by area control for a 50-year planning horizon. Based on the Sustainable Forest Management Plan an Annual Work Plan is developed for each forest including planned harvests and other management activities. The Annual Work Plan is reviewed by various agencies in the Maryland DNR, and a Citizen's Advisory Team. It is also posted on the Maryland DNR Forest Service website for public comment for a period of 30 days. Following review of comments the finalized plan is approved and posted on the Maryland DNR Forest Service website.

This report describes the results of the 2018 Surveillance Audit which considered changes in operations, the management review system, and efforts at continuous improvement. A subset of the SFI requirements were selected for detailed review.

## Maryland's State Forests

Maryland DNR Forest Service is responsible for the management of the 215,607 acres of Maryland State Forests through a variety of designations. The Forest Service is supported by other agencies within the Department of Natural Resources including Wildlife, Fisheries, Heritage, and the Natural Resources Police. Various management plans provide a useful summary of the importance of these forestlands and the broad policy goals:

### Excerpted from the Savage River State Forest Management Plan:

'The resources and values provided from state forests reach people throughout the State and beyond. These resources and values range from economic to aesthetic and from scientific to inspirational. The Department of Natural Resources is mandated by law to consider a wide variety of issues and uses when pursuing a management strategy for these forests. The importance of considering these factors is acknowledged in the Annotated Code, which establishes the following policy pertaining to state forests and parks:

"Forests, streams, valleys, wetlands, parks, scenic, historic and recreation areas of the state are basic assets. Their proper use, development, and preservation are necessary to protect and promote the health, safety, economy and general welfare of the people of the state. It is the policy of the state to encourage the economic development and the use of its natural resources for the improvement of the local economy, preservation of natural beauty, and promotion of the recreational and leisure interest throughout the state." (Annotated Code of Maryland, Natural Resources Article §5-102)

The Department recognizes the many benefits provided by state forests and has established a corresponding management policy in regulation.

"The state forests are managed to promote the coordinated uses of their varied resources and values for the benefit of all people, for all time. Water, wildlife, wood, natural beauty and opportunities for natural environmental recreation, wildlands experience, research demonstration areas, and outdoor education are major forest benefits." (Code of Maryland Regulations 08.07.01.01)

The 2018 Surveillance Audit was performed by NSF on April 24-26, 2018 by an audit team headed by Mike Ferrucci, Lead Auditor. Beth Jacquain was the FSC Lead Auditor and supported the lead auditor. Audit team members fulfill the qualification criteria for conducting audits contained in SFI 2015-2019 Standards and Rules, Section 9 - Procedures and Auditor Qualifications and Accreditation.

The objective of the audit was to assess conformance of the firm's SFI Program to the requirements of the SFI 2015-2019 Standard and Rules, Section 2 – Forest Management.

The scope of the audit included forest management operations. Forest practices that were the focus of field inspections included those that have been under active management over the planning period of the past 2 years. In addition practices conducted earlier were also reviewed as appropriate (regeneration and BMP issues, for example); SFI obligations to promote sustainable forestry practices, to seek legal compliance, and to incorporate continual improvement systems were also within the scope of the audit.

The SFI Standard was used without modifying any requirements. SFI requirements that are outside of the scope of Maryland's SFI program were excluded from the scope of the SFI Certification Audit as follows:

- Indicator 10.1.2. Research on genetically engineered trees via forest tree biotechnology shall adhere to all applicable federal, state, and provincial regulations and international protocols ratified by the United States and/or Canada depending on jurisdiction of management. Maryland DNR Forest Service does not participate in research on genetically engineered trees.

## Audit Process

NSF initiated the SFI audit process with a series of planning phone calls and emails to reconfirm the scope of the audit, review the SFI Indicators and evidence to be used to assess conformance, verify that Maryland DNR Forest Service was prepared to proceed to the SFI Audit, and to prepare a detailed audit plan.

The audit was governed by a detailed audit plan designed to enable the audit team to efficiently determine conformance with the applicable requirements. The plan provided for the assembly and review of audit evidence consisting of documents, interviews, and on-site inspections of ongoing or completed forest practices.

During the audit NSF reviewed a sample of the written documentation assembled to provide objective evidence of conformance. NSF also selected field sites for inspection based upon the risk of environmental impact, likelihood of occurrence, special features, and other criteria outlined in the NSF protocols. NSF selected and interviewed stakeholders such as contract loggers, landowners and other interested parties, and interviewed employees within the organization to confirm that the SFI Standard was understood and actively implemented. The activities of the central office were reviewed against the multi-site requirements as well.

The possible findings of the audit included conformance, major non-conformance, minor non-conformance, opportunities for improvement, and practices that exceeded the requirements of the standard.

A report was prepared and final approval was done by an independent Certification Board Member assigned by NSF. Follow-up or Surveillance Audits are required by the Sustainable Forestry Initiative Standard<sup>®</sup>. The next Recertification Audit is scheduled for the first week of April, 2019.

## Overview of Audit Findings

Maryland's SFI Program demonstrated conformance against the SFI 2015-2019 Standard. There were zero 2018 non-conformances, and three "Opportunities for Improvement". The program has continued to exceed the standard in several areas. As such, the program has earned continuing certification.

There were no new Non-Conformances in the 2018 audit.

Two Minor Non-Conformances identified in the 2017 audit have been resolved:

1. In the FY2017 Annual Work Plans (AWP) for western State Forests the Ecologically Significant Area (ESA) Plans had not been completed, but have since been. (SFI 2015-2019 Standards and Rules<sup>®</sup>, Section 2 – Forest Management, 1Indicator 1.1.1 i)
2. On the Maryland DNR Forest Service website the words "Sustainable Forestry Initiative" now does include the registered trademark - <sup>®</sup>. (SFI 2015-2019 Standards and Rules<sup>®</sup>, Section 5 Part 4, Indicator 4.2)

Progress in implementing these corrective action plans will be reviewed in subsequent surveillance audits.

Three opportunities for improvement (OFI) were identified in the 2018 audit:

1. There is an Opportunity for Improvement in the management plans to accurately describe the status (ongoing vs. completed) of all activities; some completed activities are described as planned or pending. SFI Indicator 1.1.1 requires "Forest management planning at a level appropriate to the size and scale of the operation".
2. There is an Opportunity for Improvement in the use of the trademark symbol (<sup>™</sup>) in documents when first using the initials SFI. SFI Section 5 - Rules for Use of *SFI* On-Product Labels and Off-Product Marks provides required and recommended practices for use of the SFI logo and other trademarked items.
3. There is an Opportunity for Improvement regarding the awareness of predicted climate change patterns and the impacts to wildlife and biodiversity. SFI Indicator 10.3.2 requires a "Program Participants are knowledgeable about climate change

impacts on wildlife, wildlife habitats and conservation of biological diversity through international, national, regional or local programs.”

These findings do not indicate a current deficiency, but served to alert Maryland DNR Forest Service to areas that could be strengthened or which could merit future attention.

NSF also identified the following areas where forestry practices and operations of Maryland DNR Forest Service exceed the basic requirements of the standard:

There were five areas where the forestry program of Maryland DNR’s Forest Service “Exceeds the Requirements”:

1. The program exceeds the requirements for promoting conservation of native biological diversity.  
SFI Indicator 4.1.1 requires a “Program to incorporate the conservation of native biological diversity, including species, wildlife habitats and ecological community types at stand and landscape levels.”
2. The program exceeds the requirements for retaining stand-level wildlife habitat elements.  
SFI Indicator 4.1.2 requires the “Development of criteria and implementation of practices, as guided by regionally based best scientific information, to retain stand-level wildlife habitat elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees.”
3. The program exceeds the requirements for the protection of threatened and endangered species.  
SFI Indicator 4.2.1 requires a “Program to protect threatened and endangered species.”
4. The program exceeds the requirements for providing an exceptional range of high-quality recreational opportunities State Forests.  
SFI Indicator 5.4.1 requires participants to “Provide recreational opportunities for the public, where consistent with forest management objectives.”
5. The MD DNR’s use of information and expert advice or stakeholder consultation in the identification special sites for protection exceeds the requirements for this indicator.  
SFI Indicator 6.1.1 requires the “Use of information such as existing natural heritage data, expert advice or stakeholder consultation in identifying or selecting special sites for protection.”

## General Description of Evidence of Conformity

NSF's audit team used a variety of evidence to determine conformance. The audit team visited 32 field sites, including:

- 20 completed or ongoing timber harvest sites, some of which included multiple treatment units that were reviewed;
- 4 recreation sites/trails (plus numerous other recreation sites observed during travel);
- 4 sites where roads and/or bridges were reviewed on the ground, and several miles of roads that were assessed while driving between sites where the team stopped;
- 1 site where a silvicultural treatment other than a harvest (herbicide as site-preparation) was applied; and
- 3 special sites of historic or ecological significance.

A further description of the audit evidence is provided below, organized by SFI Objective.

### Objective 1 Forest Management Planning

To ensure forest management plans include long-term sustainable harvest levels and measures to avoid forest conversion.

*Summary of Evidence: The forest management plans for each state forest and supporting documentation and the associated inventory data and growth analyses were the key evidence of conformance. The plans for all six of the forests involved (four plans cover the six forests) were key to this finding.*

### Objective 2 Forest Health and Productivity

To ensure long-term forest productivity, carbon storage and conservation of forest resources through prompt reforestation, afforestation, minimized chemical use, soil conservation, and protecting forests from damaging agents.

*Summary of Evidence: Field observations and associated records including annual work plans and "State Forest Database" reports were used to confirm practices. Maryland DNR Forest Service has programs for reforestation, for protection against insects, diseases, and wildfire, and for careful management of activities which could potentially impact soil and long-term productivity. Special recreation-oriented grants allow for some road maintenance work, further supporting conformance.*

### Objective 3 Protection and Maintenance of Water Resources

To protect the water quality of rivers, streams, lakes, wetlands and other water bodies through meeting or exceeding best management practices.

*Summary of Evidence: Field observations of a range of sites were the key evidence. Auditors visited the portions of field sites that were close to water resources, generally riparian buffers, and confirmed that these buffers were flagged during planning, painted prior to harvests, and respected during harvesting operations. Auditors also confirmed strong programs for planning and for project oversight that ensure protection of water resources.*

### Objective 4 Conservation of Biological Diversity

To manage the quality and distribution of wildlife habitats and contribute to the conservation of biological diversity by developing and implementing stand- and landscape-level measures that promote a diversity of types of habitat and successional stages, and the conservation of forest plants and animals, including aquatic species, as well as threatened and endangered species, Forests with Exceptional Conservation Value, old-growth forests and ecologically important sites.

*Summary of Evidence: Although this objective was not selected for complete review during the 2018 audit, in the past field observations, written plans and policies for the protection of old growth, High Conservation Value Forests, and representative sample areas were the key evidence used to assess the requirements involved biodiversity conservation. This is supported by the availability of college-trained field biologists to conduct project reviews. The 2018 audit showed that these programs continue.*

### Objective 5 Management of Visual Quality and Recreational Benefits

To manage the visual impact of forest operations and provide recreational opportunities for the public.

*Summary of Evidence: Field observations of completed operations and policies/procedures for visual quality were assessed during the evaluation. Interviews with stakeholders and partners, maps and descriptions of recreation sites, combined with selected field visits helped confirm a strong recreation program. Stakeholder contacts supported the DNR's statements regarding efforts to balance recreational use and environmental protections.*

### Objective 6 Protection of Special Sites

To manage lands that are geologically or culturally important in a manner that takes into account their unique qualities.

*Summary of Evidence: Field observations of completed operations, GIS maps and other records of special sites, training records, and written protection plans were all assessed during the evaluation. Partners within the DNR and outside stakeholders participate in identification of special sites.*

**Objective 7 Efficient Use of Fiber Resources**

To minimize waste and ensure the efficient use of fiber resources.

*Summary of Evidence: Field observations of completed operations, contract clauses, and discussions with supervising field foresters and with loggers provided the key evidence. The Maryland Forest Service is working to improve markets for forest products, particularly markets related to bioenergy.*

**Objective 8 Recognize and Respect Indigenous Peoples' Rights**

To recognize and respect Indigenous Peoples' rights and traditional knowledge.

*Summary of Evidence: All of the management plans include the policy statement developed to recognize and respect Indigenous Peoples' rights. Mechanisms are in place to receive and act on any comments received.*

**Objective 9 Legal and Regulatory Compliance**

To comply with applicable federal, provincial, state and local laws and regulations.

*Summary of Evidence: While this Objective was not audited in 2018, in the past it was found that the program employs specialists to ensure that conservation laws are followed. All project receive extensive review by interdisciplinary teams. Protocols are in place which have been checked to ensure compliance.*

**Objective 10 Forestry Research, Science and Technology**

To invest in forestry research, science and technology, upon which sustainable forest management decisions are based and broaden the awareness of climate change impacts on forests, wildlife and biological diversity.

*Summary of Evidence: Discussions with stakeholders and support for research on state forest lands were the key evidence used. Forests are used for several ongoing research projects such as research projects involving Chestnut blight hypo-virulence, Wood rat biology, and biology of Spotted skunks, as well as a major trial of a pesticide to control the Hemlock Woolly Adelgid.*

**Objective 11 Training and Education**

To improve the implementation of sustainable forestry practices through appropriate training and education programs.

*Summary of Evidence: While this Objective was not audited in 2018, in the past evidence included review of training records, and the records of support for the Maryland Master Logger Program. Further all harvests are conducted by logging crews with one or more Maryland Master Loggers.*

**Objective 12 Community Involvement and Landowner Outreach**

To broaden the practice of sustainable forestry through public outreach, education, and involvement, and to support the efforts of SFI Implementation Committees.

*Summary of Evidence: Forest managers interviewed described various outreach/educational efforts including periodic tree planting events, annual 1-day course for Garret County students in preparation for the Maryland Envirothon; two courses at Garrett College (Dendrology, Forest Management); periodic hikes and tours; speaking to local citizens groups; and forestry talks at the GRSF overlook to tour bus groups among others. Interviews with members of two of the citizen's advisory groups, and the DNR website were also used to confirm conformance with these requirements.*

**Objective 13 Public Land Management Responsibilities**

To participate and implement sustainable forest management on public lands.

*Summary of Evidence: This objective was not audited in 2018, but strong conformance was found during past audits.*

**Objective 14 Communications and Public Reporting**

To increase transparency and to annually report progress on conformance with the SFI Forest Management Standard.

*Summary of Evidence: Reports filed with SFI Inc. and the SFI Inc. website provided the key evidence. The state forests web site includes the complete certification reports from the past years.*

**Objective 15. Management Review and Continual Improvement**

To promote continual improvement in the practice of sustainable forestry by conducting a management review and monitoring performance.

*Summary of Evidence: The state forests web site includes the organization's Sustainable Forestry Initiative Management Reviews for the past 10 years. The most recent of these program reviews, agendas and notes from field reviews, and interviews with personnel from all involved levels in the organization were assessed to determine conformance.*

## Relevance of Forestry Certification

Third-party certification provides assurance that forests are being managed under the principles of sustainable forestry, which are described in the Sustainable Forestry Initiative Standard as:

### 1. Sustainable Forestry

To practice sustainable forestry to meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates reforestation and the managing, growing, nurturing and harvesting of trees for useful products and ecosystem services such as the conservation of soil, air and water quality, carbon, biological diversity, wildlife and aquatic habitats, recreation and aesthetics.

### 2. Forest Productivity and Health

To provide for regeneration after harvest and maintain the productive capacity of the forest land base, and to protect and maintain long-term forest and soil productivity. In addition, to protect forests from economically or environmentally undesirable levels of wildfire, pests, diseases, invasive exotic plants and animals and other damaging agents and thus maintain and improve long-term forest health and productivity.

### 3. Protection of Water Resources

To protect water bodies and riparian areas, and to conform with forestry best management practices to protect water quality.

### 4. Protection of Biological Diversity

To manage forests in ways that protect and promote biological diversity, including animal and plant species, wildlife habitats, and ecological or natural community types.

### 5. Aesthetics and Recreation

To manage the visual impacts of forest operations, and to provide recreational opportunities for the public.

### 6. Protection of Special Sites

To manage lands that are ecologically, geologically or culturally important in a manner that takes into account their unique qualities.

### 7. Responsible Fiber Sourcing Practices in North America

To use and promote among other forest landowners sustainable forestry practices that are both scientifically credible and economically, environmentally and socially responsible.

### 8. Legal Compliance

To comply with applicable federal, provincial, state, and local forestry and related environmental laws, statutes, and regulations.

### 9. Research

To support advances in sustainable forest management through forestry research, science and technology.

### 10. Training and Education

To improve the practice of sustainable forestry through training and education programs.

### 11. Community Involvement and Social Responsibility

To broaden the practice of sustainable forestry on all lands through community involvement, socially responsible practices, and through recognition and respect of Indigenous Peoples' rights and traditional forest-related knowledge.

### 12. Transparency

To broaden the understanding of forest certification to the SFI Standard by documenting certification audits and making the findings publicly available.

### 13. Continual Improvement

To continually improve the practice of forest management, and to monitor, measure and report performance in achieving the commitment to sustainable forestry.

### 14. Avoidance of Controversial Sources including Illegal Logging in Offshore Fiber Sourcing

*(Applies only to the SFI 2015-2019 Fiber Sourcing Standard)*

To avoid wood fiber from illegally logged forests when procuring fiber outside of North America, and to avoid sourcing fiber from countries without effective social laws.

**Source:** Sustainable Forestry Initiative® (SFI) Standard, 2015–2019 Edition



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**For Additional Information Contact:**

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**Appendix 3**

**SFI 2015-2019, Section 2: Forest Management Standard Audit Checklist**

OY301 - Maryland DNR Forest Service

Date of audit: April 24-26, 2018

**1.2 Additional Requirements**

*SFI Program Participants with fiber sourcing programs* (acquisition of roundwood and field-manufactured or primary-mill residual chips, pulp and veneer to support a forest products facility), must also conform to the *SFI 2015-2019 Fiber Sourcing Standard*.

Use of the *SFI* on-product labels and claims shall follow Section 5 - Rules for Use of *SFI* On-Product Labels and Off-Product Marks as well as ISO 14020:2000.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: There is an Opportunity for Improvement in the use of the trademark symbol (TM) in documents when first using the initials SFI. It is recommended that the trademark symbol accompany the first use of the initials SFI in any document. Contracts reviewed don't meet this recommendation.

**Objective 1 Forest Management Planning**

To ensure forest management plans include *long-term* sustainable harvest levels and measures to avoid forest conversion.

**Performance Measure 1.1**

*Program Participants* shall ensure that forest management plans include *long-term* harvest levels that are sustainable and consistent with appropriate *growth-and-yield models*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Plans include maximum harvest levels based on inventory data and growth models. On Savage River State Forest, Potomac Garrett State Forest and the eastern forests Spatial Woodstock is used to develop growth estimates; planned harvest rates are well within these growth rates. For example SRSF is estimated to be growing 12.9 MMBF/year but planned harvests are 2.3 MMBF/year.

**1.1.1 Forest management planning at a level appropriate to the size and scale of the operation, including:**

- a. a *long-term* resources analysis;
- b. a periodic or ongoing *forest inventory*;
- c. a land classification system;
- d. biodiversity at *landscape* scales;
- e. soils inventory and maps, where available;
- f. access to *growth-and-yield modeling* capabilities;
- g. up-to-date maps or a geographic information system (GIS);
- h. recommended sustainable harvest levels for areas available for harvest; and
- i. a review of non-timber issues (e.g., recreation, tourism, pilot projects and economic incentive *programs* to promote water *protection*, carbon storage, *bioenergy feedstock* production, or *biological diversity conservation*, or to address climate-induced ecosystem change).

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: Plans for the 3 western state forests were reviewed and found to cover the SFI requirements and more. Potomac Garrett State Forest: updated April 21, 2018, Chapter 2 Resource Assessment includes 15 topics. Savage River State Forest: updated April 13, 2018. Green Ridge State Forest: updated April 13, 2018. These plans cover requirements a-f, h, and i. For requirement g a comprehensive GIS was confirmed via review of management plans, printed maps, and interviews. There is an Opportunity for Improvement in the management plans to accurately describe the status (ongoing vs. completed) of all activities; some completed activities are described as planned or pending.

During the 2017 audit it was found that the Ecologically Significant Area (ESA) Plans for western State Forests had not been completed. Forestry has been working with staff and with leadership of the Heritage Program, and plans for the ESAs within the 3 western state forest management plans now include maps, descriptions, and prescriptions for each ESA.

In 2017 there was an Opportunity for Improvement by including in forest management plans more information (known by forest managers) about the role of conifers in the natural history, historic composition, and ecology of higher-elevation portions of the western forests. This work has been completed.

1.1.2 Documented current harvest trends fall within long-term sustainable levels identified in the forest management plan.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Harvest levels are documented in Annual Work Plans and have been at or below levels identified in plans. For example, the Potomac Garrett State Forest FY-18 Annual Work Plan, Appendix 1 – 10-Year Timber Harvest Summary (excerpted below) shows that volumes harvested have been consistent with and generally below planned harvests. Fluctuations have been reasonable, due to flexible harvest timing, market variations, and salvage needs. Averages support finding of conformance.

<i>Fiscal Year</i>	<i>Planned harvest</i>	<i>Bd. Ft Vol. Harvested</i>	<i>Gross Value of sale</i>
2008	500 – 750 MBF*	793,002	\$ 288,102
2009	500 MBF *	251,990	\$ 29,578
2010	500 MBF *	168,131	\$ 31,720
2011	500-600 MBF	465,653	\$ 155,900
2012	500-600 MBF	534,679	\$ 207,454
2013	500-600 MBF	331,052	\$ 139,300
2014	300 MBF	298,221	\$ 90,031
2015	552 MBF	492,401	\$ 201,311
2016	634 MBF	542,534	\$ 141,416
2017	533 MBF	Not sold yet.	Not sold yet.

(\* Salvage driven sales.) (\*\*Saw log volumes lost to pulpwood.)

Harvest plans from recent 3-4 years more-accurately depict the extent of operable forestland and reserves in each harvest unit. This is factored into the allowable harvest calculations.

Current harvest levels appear to be consistent with plans and with forest health maintenance.

1.1.3 A forest inventory system and a method to calculate growth and yield.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Western forests: 2000 CFI data were supplemented by recently-completed 5-year stand-level inventory project, which is analyzed using the Remsoft Spatial Woodstock model for the development of long-term projections on the state forests. Each management plan contains sections on 5.12 Forest Modeling, with sub-sections covering Modeling Long-term Sustainability, Indicators, the Model, and model results.

1.1.4 Periodic updates of forest inventory and recalculation of planned harvests to account for changes in growth due to productivity increases or decreases, including but not limited to: improved data, long-term drought, fertilization, climate change, changes in forest land ownership and tenure, or forest health.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: PGSF and SRSF: Data from the 5-year stand-level inventory project was used to develop a volume-control target based allowable harvest level. The implications of the differences in each harvest unit between volumes potentially available and volumes actually marked and sold from operable forestland after excluding reserve areas are still being considered. Actual volumes are well below “allowable” volumes in part due to these differences, and in part due to fluctuating markets and limitations of logging and trucking capacity in the region, which is rugged with a challenging road system.

Green Ridge State Forest: The harvest on this forest is managed using area control. Areas available for harvest are divided by the 100-year planned rotation, leaving 200 acres of regeneration treatment per year.

1.1.5 Documentation of forest practices (e.g., *planting*, fertilization and thinning) consistent with assumptions in harvest plans.

- N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

Audit Notes: Annual works plans are the primary tool for tracking, reporting, and making information available regarding implementation of forest practices. For the western forests the database system of quarterly reports has been implemented for 2+ years. Western Maryland state forest managers maintain an annual work plan silvicultural log where status of all approved and yet outstanding silvicultural projects are recorded and status is reported to MFS leadership quarterly. These documents were used to develop the audit plan and were reviewed at that time. The activity tracking system is comprehensive and robust.

**Performance Measure 1.2**

*Program Participants* shall not convert one *forest cover type* to another *forest cover type*, unless in justified circumstances.

- 1.2.1 Program Participants shall not convert one *forest cover type* to another *forest cover type*, unless the conversion:
- Is in compliance with relevant national and regional *policy* and legislation related to land use and forest management;
  - Would not convert *native* forest types that are rare and ecologically significant at the *landscape* level or put any *native* forest types at risk of becoming rare; and
  - Does not create significant long-term adverse impacts on Forests with Exceptional Conservation Value, old-growth forests, forests critical to threatened and endangered species, and special sites.

- N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

Audit Notes: Planning methods ensure that this indicator is met. This includes pre-project inventory and analysis involving specialists from several disciplines, with particular attention paid to RTE species, etc.

1.2.2 Where a *Program Participant* intends to convert another *forest cover type*, an assessment considers:

- Productivity* and *stand* quality conditions and impacts which may include social and economic values;
- Specific ecosystem issues related to the site such as invasive species, insect or disease issues, riparian *protection* needs and others as appropriate to site including regeneration challenges; and
- Ecological impacts of the conversion including a review at the site and *landscape* scale as well as consideration for any appropriate mitigation measures.

- N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

Audit Notes: Most harvests goals include maintaining composition within broadly-similar stand types, consistent with natural stand dynamics. For example oak-maple stands on mesic sites are allowed to trend towards more sugar maple and less red oak, which would be very difficult to avoid due to long-term fire suppression and other factors. The AWP and the ID Team ensure that the requirements are met. Conversions are driven by ecological considerations including restoring rare or under-represented cover types. Considerable effort has been made to understand natural stand development processes and long-term trends, as well as landscape-scale factors. A recent analysis shows that conifer component, while only 6-7 percent of western Maryland’s forest cover, is somewhat above the level of 100 years ago. Many conifer species will be difficult to sustain due to long-term warming and drying trends (fir and spruce), high deer populations (white pine), or insects (hemlock). Norway spruce and red pine planted on former open or agricultural land have grown well, developing into stands that provide valuable lumber, useful wildlife habitat, and scenic and recreational value. As such these stands are being managed through thinning and partial regeneration treatments to sustain these values, and consideration is given to regenerating these species along with long-native white pine.

**Performance Measure 1.3**

*Program Participants* shall not have within the scope of their certification to this *SFI Standard*, forest lands that have been converted to non-forest land use. Indicator:

- 1.3.1 Forest lands converted to other land uses shall not be certified to this *SFI Standard*. This does not apply to forest lands used for forest and *wildlife* management such as *wildlife* food plots or infrastructure such as forest roads, log processing areas, trails etc.

- N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

Audit Notes: No conversions are done except for wildlife management or allowed infrastructure.

## Objective 2 Forest Health and Productivity

To ensure *long-term forest productivity*, carbon storage and *conservation* of forest resources through prompt *reforestation*, *afforestation*, *minimized chemical use*, *soil conservation*, and protecting forests from damaging agents.

### Performance Measure 2.1

*Program Participants* shall promptly reforest after final harvest. Indicators:

2.1.1 Documented *reforestation* plans, including designation of all harvest areas for either natural, planted or direct seeded regeneration and prompt *reforestation*, unless delayed for site-specific environmental or *forest health* considerations or legal requirements, through *planting* within two years or two *planting* seasons, or by planned *natural regeneration* methods within five years.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Foresters in western Maryland state forests rely exclusively on the SILVAH protocols for regeneration and for assessing results.

Savage River State Forest and Potomac Garrett State Forest plan to conduct regeneration checks five years after completion of first-cut shelterwood harvests and overstory removal harvests.

Green Ridge State Forest: regeneration checks at 2 years and 5 years

Regeneration method is described in the AWP; recently most regeneration is natural (planting is rarely done).

2.1.2 Clear criteria to judge adequate regeneration and appropriate actions to correct understocked areas and achieve acceptable species composition and stocking rates for *planting*, *direct seeding* and *natural regeneration*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Regeneration criteria are forest-type specific. Western-most two forests (SRSF and PGSF) use Oak-SILVAH for criteria and for protocols for regeneration surveys. No regeneration delays were observed.

2.1.3 Plantings of exotic tree species should minimize risk to native ecosystems.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Western forests rarely plant, and normally only to meet wildlife habitat objectives. Native species are used.

2.1.4 *Protection* of desirable or planned advanced *natural regeneration* during harvest.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Foresters assess the regeneration status of all stands considered for treatments prior to harvest using robust regeneration inventory methods, supplemented by informal observations. Field observations confirm that advanced natural regeneration is protected during harvest; most of the regeneration stems are hardwood species that sprout reliably if cut, often with improved form, and thus are resilient; when foresters so direct, loggers avoid cutting desirable stems (those of key species which are well-formed). Softwood regeneration is protected.

2.1.5 *Afforestation programs* that consider potential ecological impacts of the selection and *planting* of tree species in non-forested *landscapes*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: AWP and ID Team processes ensure that any treatment designed to change species composition is designed and reviewed by a team with expertise in forestry, ecology, botany, and other skills as needed. There are few open areas in the western forests, and most are maintained for reasons related to maintaining structural diversity and important wildlife habitat elements.

**Performance Measure 2.2**

Program Participants shall *minimize* chemical use required to achieve management *objectives* while protecting employees, neighbors, the public and the environment, including *wildlife* and *aquatic habitats*. Indicators:

2.2.1 *Minimized* chemical use required to achieve management *objectives*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The "Annual Summary of pesticide and other chemical use, 2017-2018" lists pesticides applied over a 12-month period. Treatments covered less than 0.4% of acres under management. Forest chemicals are applied only as needed, and generally to control or set-back understory vegetation hindering natural regeneration or to control invasive, exotic plants. These treatments are carefully planned to ensure that they do not adversely affect "non-target" organisms. Spot treatments are the preferred method.

Spray protocols are described in management plans:

"Chemicals are applied only by appropriately trained and licensed workers according to state requirements. When chemicals are used, the effects are monitored and the results are used to determine the measure of success and if treatment modifications can be employed, such as reduced application rates. Records are kept according to State requirements."

Observed many portions of sites where treatment areas were carefully flagged based on small-scale, precise conditions; decisions appear to minimize use.

2.2.2 Use of least-toxic and narrowest-spectrum pesticides necessary to achieve management objectives.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Many treatments used Glyphosate, which is accepted as one of the "least-Toxic" herbicides on the market. Glyphosate has no soil activity; it only will work on vegetation it is directly applied to.

The remaining treatments mostly used Triclopyr, Imazapyr, or sulfometuron methyl, generally for grasses or difficult to kill hardwoods. 1.8 gallons of Dicamba was used to kill 1250 Ailanthus stems.

2.2.3 Use of pesticides registered for the intended use and applied in accordance with label requirements.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Trained foresters prescribe chemicals which are applied by trained applicators, and both parties check to ensure the uses align with label requirements. Interviewed licensed foresters on the PGSF (John Denning) and the GRSF (Mark Beals and Jesse Morgan). Chemicals used (glyphosate, Triclopyr, Imazapyr, or sulfometuron methyl) are registered for forestry uses.

2.2.4 The World Health Organization (WHO) type 1A and 1B pesticides shall be prohibited, except where no other viable alternative is available.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Chemicals used (glyphosate, Triclopyr, Imazapyr, or sulfometuron methyl) are not on prohibited list.

2.2.5 Use of pesticides banned under the Stockholm Convention on Persistent Organic Pollutants (2001) shall be prohibited.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Chemicals used (glyphosate, Triclopyr, Imazapyr, or sulfometuron methyl) are not on prohibited list.

2.2.6 Use of *integrated pest management* where feasible.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Interviews, and documentation show that chemicals are only applied after careful site analysis, development of a prescription, ID review, and by trained applicators. The treatment area is provided to the applicator on printed maps supplemented by GIS data (.shp file). The contractor provides GIS data showing “spray on” flight lines the treatment area.

2.2.7 Supervision of forest chemical applications by state- or provincial-trained or certified applicators.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Potomac Garrett State Forest: Confirmed state-issued cards for Licensed Applicator John Denning and for Jason Savage, registered employee. They described training, application protocols, and records.  
Potomac Garrett State Forest: Interviewed licensed foresters Mark Beals and Jesse Morgan who are responsible for planning and arranging chemical applications.

2.2.8 Use of management practices appropriate to the situation, for example:

- a. notification of adjoining landowners or nearby residents concerning applications and chemicals used;
- b. appropriate multilingual signs or oral warnings;
- c. control of public road access during and immediately after applications;
- d. designation of streamside and other needed buffer strips;
- e. use of positive shutoff and minimal-drift spray valves;
- f. aerial application of forest chemicals parallel to buffer zones to *minimize* drift;
- g. monitoring of water quality or safeguards to ensure proper equipment use and *protection* of streams, lakes and other water bodies;
- h. appropriate transportation and storage of chemicals;
- i. filing of required state or provincial reports; and/or
- j. use of methods to ensure *protection of threatened and endangered species*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: All forests use ID Team to review, modify as needed, and approve all treatments including proposed chemical applications, ensuring d, g, and j.  
Potomac Garrett State Forest interviews, review of MSDS sheets and labels, and inspection of chemical storage shed confirmed a, c, d, h, i, and j.

**Performance Measure 2.3**

*Program Participants* shall implement forest management practices to protect and maintain forest and soil *productivity*. Indicators:

2.3.1 Process to identify soils vulnerable to compaction, and use of appropriate methods, including the use of soil maps where available, to avoid excessive soil disturbance.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Despite months of unusually wet weather very limited rutting and soil compaction was observed, and only in some harvest areas. Levels of disturbance were within limits specified by the MFS rutting policy. Loggers plan skid trails to avoid most sensitive soils and are using slash to protect such soils when they can’t be avoided, and halt operations when precipitation has moistened soils to the point that they are vulnerable to damage from logging equipment. Foresters regularly inspect harvests and complete inspection checklists that include reporting of site conditions and measures to avoid damage. MD DNR Forest Service Cutting Exam Checklist used on all state forests to document periodic harvest inspections includes evaluation of skid trails and landings.

2.3.2 Use of erosion control measures to *minimize* the loss of soil and site *productivity*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Field observations confirm the widespread use of erosion control measures. Water bars, placement of logging slash to stabilize disturbed soils or as a protective mat for heavily used skid trails, and careful planning to avoid impacts were the chief measures employed, and these have generally been very effective in controlling erosion. Despite record rainfall levels over recent weeks few erosion issues were observed during the 2018 field audits, and these were within acceptable limits.

2.3.3 Post-harvest conditions conducive to maintaining site *productivity* (e.g., limited rutting, retained down woody debris, *minimized skid trails*).

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Limited rutting, retained down woody debris, and minimized skid trails were observed; harvests are carefully planned and work is inspected to ensure that site productivity is maintained.

2.3.4 Retention of vigorous trees during partial harvesting, consistent with scientific silvicultural standards for the area.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Management goals and methods show a strong orientation towards implementation of sound silviculture. SILVAH protocols are being implemented for hardwood harvests in the western mountains, with modifications on Green Ridge State Forest which is located in the Ridge and Valley Ecoregion slightly outside of the designated area for this well-regarded silviculture decision-support tool. Harvests reviewed in the western forests included several thinnings and some first-stage regeneration treatments (PGSF and SRSF) and five variable-retention regeneration harvests; in all cases residual trees appeared to be from the dominant/co-dominant crown classes and were vigorous consistent with scientific principles. Narratives for proposed harvests, particularly the Silvicultural Prescriptions, are detailed, comprehensive, and well-written.

2.3.5 Criteria that address harvesting and site preparation to protect soil *productivity*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The management plans and MFS Policy Procedure Manual (Operation Order 2015-601 Effective: April 1, 2015, Timber Operation Order) contain clear criteria, including rutting guidelines (Rutting Guidelines For Forest Operations on Maryland State Forests. Updated: 2013-04-29).

2.3.6 Road construction and skidding layout to *minimize* impacts to soil *productivity*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Auditors reviewed many road segments which have been recently (past 3 years) upgraded, and reviewed a significant portion of the state forest road system when traveling to selected field sites. Roads observed were mostly in very good condition, with exceptions generally in line for attention soon.  
Skid road and skid trails observed were located and constructed in ways consistent with BMPs and this indicator.

**Performance Measure 2.4**

*Program Participants shall manage so as to protect forests from damaging agents, such as environmentally or economically undesirable wildfire, pests, diseases and invasive exotic plants and animals, to maintain and improve long-term forest health, productivity and economic viability.* Indicators:

2.4.1 *Program to protect forests from damaging agents.*

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Potomac Garrett State Forest: confirmed Invasive Species Control Records.

Green Ridge State Forest: Foresters interviewed are knowledgeable about invasive species and described control methods and priorities. Trees (Tree-of-Heaven and Paulownia) and woody shrubs (honeysuckle) are priorities.

Professional foresters oversee all aspects of forest vegetation management, applying silvicultural methods designed to develop and maintain healthy forest stands. Confirmed continuing close attention by field foresters to forest health issues. The program has several facets including forest inventory, management planning, and regular silviculture treatment, as well as insect and disease reconnaissance through MDA and USFS programs.

Savage River State Forest has made excellent progress catching up on needed stand treatments, notably thinning in conifer stands and some hardwood stands.

2.4.2 *Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.*

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Field observations allowed the audit team to conclude that the increased pace of forest management practices are developing and maintaining healthy forests in most areas. Most stands observed were properly stocked to slightly over-stocked; overstocked stands are prioritized when developing stand prescriptions and harvesting plans.

2.4.3 *Participation in, and support of, fire and pest prevention and control programs.*

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Maryland Forest Service is the lead forest agency; many state forest workers are trained as wild fire fighters, including about 90% of the foresters and technicians for the western state forests. Fire-fighting equipment was observed.

**Performance Measure 2.5**

Program Participants that deploy improved planting stock, including varietal seedlings, shall use best scientific methods. Indicator:

2.5.1 *Program for appropriate research, testing, evaluation and deployment of improved planting stock, including varietal seedlings.*

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Few trees are planted on the western state forests. Trees planted in the eastern forests are sourced from providers which use scientific protocols.

**Objective 3 Protection and Maintenance of Water Resources**

To protect the water quality of rivers, streams, lakes, *wetlands* and other water bodies through meeting or exceeding *best management practices*.

**Performance Measure 3.1**

*Program Participants* shall meet or exceed all applicable federal, provincial, state and local water quality laws, and meet or exceed *best management practices* developed under Canadian or U.S. Environmental Protection Agency–approved water quality *programs*.

Indicators:

3.1.1 *Program* to implement federal, state or provincial water quality *best management practices* during all phases of management activities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Trained foresters plan and oversee all management activities, with review and approval by senior managers, biologists, and/or other specialists who have an impressive depth of knowledge and experience. The protection of water quality and management to minimize erosion are emphasized in plans, policies, and implementation of projects.

3.1.2 Contract provisions that specify conformance to *best management practices*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: All harvests are conducted under a standard contract Potomac Garrett State Forest - DNR Timber Sale Contract No. PG-05-15 includes "**Attachment C** Compliance Agreement for the Standard Erosion and Sediment Control Plan for Forest Operations." Other contracts reviewed (at SRSF and GRSF) also included this clause.

The standard provision in contracts is:

7. Sediment and Erosion Control. The Buyer shall be responsible for complying with all sediment and erosion control measures required by Title 4, Subtitle 1 of the Environment Article of The Annotated Code of Maryland. To that end the Buyer must have filled out and returned to (DNR Representative) Attachment C "Standard Erosion and Sediment Control Plan for Forest Harvest Operations" (hereinafter referred to as "Sediment Plan") prior to commencing any harvest activities. Failure to do so will render this Agreement voidable. The Sediment Plan is hereby expressly incorporated into this Agreement and compliance with it is required.

3.1.3 Monitoring of overall *best management practices* implementation.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Foresters regularly inspect all ongoing harvests. The MD DNR Forest Service Cutting Exam Checklist used on the three forests audited in 2018 includes BMPs, as do inspection forms for other.

Green Ridge State Forest: Confirmed three-ring binder full of "Forest Harvest Operations – Harvest Site Review" checklists for ongoing harvests.

**Performance Measure 3.2**

*Program Participants* shall implement water, *wetland* and *riparian protection* measures based on soil type, terrain, vegetation, ecological function, harvesting system, state *best management practices (BMPs)*, provincial guidelines and other applicable factors.

Indicators:

3.2.1 *Program* addressing management and *protection* of rivers, streams, lakes, *wetlands*, other water bodies and *riparian areas* during all phases of management, including the layout and construction of roads and *skid trails* to maintain water reach, flow and quality.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Maryland Forest Service has a comprehensive program for the protection of wetlands and watercourses. Foresters plan all harvests and treatments; other specialists review these. Such protections are the first priority during planning and implementation. All foresters are trained to follow Erosion and Sediment Control Guidelines. Specialists are available for consultation as needed; all activities are subject to interdisciplinary review.

Each forest uses a Pre-Harvest Checklist to document the pre-harvest meeting between the supervising forester and the logging crew. This checklist includes items related to water quality.

3.2.2 Mapping of rivers, streams, lakes, *wetlands* and other water bodies as specified in state or provincial *best management practices* and, where appropriate, identification on the ground.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed mapping of rivers, streams, lakes, and other water bodies in GIS databases and on timber sale maps. The riparian buffers (and other buffers for visual management or to protect steep areas or draws/dry ravines) are flagged during layout and then painted when layout is finalized; they were easy to see and no instances were noted where they were not respected by foresters.

3.2.3 Document and implement plans to manage and protect rivers, streams, lakes, *wetlands*, other water bodies and *riparian areas*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Field observations confirm that plans to manage or protect rivers, streams, lakes, and other water bodies are implemented. Most such features are protected by generous no-cut buffers, or by being placed within large ecological reserves. For streams there is a 50-foot “no-cut” buffer on each side, with a “plus four” (4 times the % slope) outer buffer where some trees may be cut).

3.2.4 Plans that address wet-weather events in order to maintain water quality (e.g., *forest inventory* systems, wet-weather tracts, definitions of acceptable operating conditions).

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Foresters work with loggers to ensure an understanding of the allowable amount of soil disturbance and rutting and to ensure that harvests are suspended when soils are too water-saturated to support logging equipment. Wet-weather tracts are set up and sold, or more commonly harvest operations are encouraged to harvest the drier portions of tracts when weather is wet and to harvest the lower, wetter portions of tracts during dry weather periods. Contracts for sale of timber are sufficiently long to allow such operational adjustments, and provisions exist for contract extensions.

Foresters report that most loggers know the importance of avoiding operating during wet weather events, and that they check on all loggers when conditions are questionable, with extra inspections for contractors who have less experience on state forest harvests. Contracts include a provision empowering Maryland Forest Service to shut down jobs (Attachment D, Clause 7) as well as a Termination Clause.

## Objective 4 Conservation of Biological Diversity

To manage the quality and distribution of *wildlife habitats* and contribute to the *conservation of biological diversity* by developing and implementing *stand-* and *landscape-*level measures that promote a diversity of types of *habitat* and successional stages, and the *conservation* of forest plants and animals, including *aquatic species, as well as threatened and endangered species, Forests with Exceptional Conservation Value, old-growth forests* and ecologically important sites.

### Performance Measure 4.1

Program Participants shall conserve biological diversity. Indicators:

4.1.1 Program to incorporate the *conservation of native biological diversity*, including species, *wildlife habitats* and ecological community types at *stand* and *landscape* levels.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The program exceeds the requirements for promoting conservation of native biological diversity.

Programs reviewed in detail during part third-party audits are still in place and operating successfully. State Forests are managed under a program that is designed to protect and enhance biodiversity as described in each Sustainable Forest Management Plan. The conservation of biological diversity is stated as the goal of management operations. This program incorporates the use of an Interdisciplinary Team (ID team) for the review and approval process of management activities. The ID team includes land managers and a variety of specialists. Each forest's Sustainable Forest Management Plan includes an extensive section describing biodiversity present and prescribing general treatments to sustain that diversity, and enhance it where feasible. The plans include stand-level and landscape-level recommendations. Major portions of most forests are set-aside for biodiversity protection.

4.1.2 Development of criteria and implementation of practices, as guided by regionally based *best scientific information*, to retain *stand-level wildlife habitat* elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The MD DNR program exceeds the requirements for retaining stand-level wildlife habitat elements.

Retention is considered by foresters during planning. On the Green Ridge State Forest auditors reviewed several ongoing or completed "Variable Retention" treatments. Reserve trees are painted by the forester (except white pine and serviceberry, which are designated for retention), focusing on desirable, long-lived species such as White oak (retained co-dominant, full-crowned white oak throughout most sites where available) and seed and fruit-producing species, of varied sizes. Several sites visited are superb examples of variable retention for wildlife, biodiversity, and visual quality management.

4.1.3 Document diversity of *forest cover types* and age or size classes at the individual ownership or forest tenure level, and where credible data are available, at the *landscape* scale. Working individually or collaboratively to support diversity of *native forest cover types* and age or size classes that enhance *biological diversity* at the *landscape* scale.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: Research and analysis into the historical presence, abundance, species, and function of conifers in the landscape shows that there is more conifer now than 100 years ago, but still a very low percentage of the landscape (6-7%). A significant part of this increase involves planted stands, notably red pine which was not naturally present. For a time the plan had been to reduce or eliminate the red pine. Then goshawk were found to nest in these areas, and now red pine stands are being maintained and enhanced to promote goshawk habitat.

4.1.4 Program Participants shall participate in or incorporate the results of state, provincial, or regional *conservation* planning and priority-setting efforts to conserve biological diversity and consider these efforts in forest management planning. Examples of credible priority-setting efforts include state *wildlife* action plans, state forest action plans, relevant *habitat conservation* plans or provincial *wildlife* recovery plans.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

4.1.5 Program to address *conservation* of known sites with viable occurrences of significant species of concern.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

4.1.6 Identification and *protection of non-forested wetlands*, including bogs, fens and marshes, and *vernal pools* of ecological significance.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

4.1.7 Participation in *programs* and demonstration of activities as appropriate to limit the introduction, spread and impact of *invasive exotic plants and animals* that directly threaten or are likely to threaten *native* plant and animal communities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed records of and/or discussed invasive plant control at all three state forests reviewed.

4.1.8 Consider the role of natural disturbances, including the use of prescribed or natural fire where appropriate, and *forest health* threats in relation to *biological diversity* when developing forest management plans.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

**Performance Measure 4.2**

Program Participants shall protect threatened and endangered species, Forests with Exceptional Conservation Values (FECV) and old-growth forests. Indicators:

4.2.1 Program to protect threatened and endangered species.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: The MD DNR program exceeds the requirements for the protection of threatened and endangered species. (SFI 2015-2019 Standards and Rules®, Section 2 – Forest Management, (Indicator 4.2.1).

The management plan for Potomac Garrett State Forest includes section 3.2 Old Growth Forest. It describes 7 areas of existing old-growth comprising 439 acres, with plans to protect these areas and to extend them by working with “nearly old growth” forests.

2017: Rare, threatened and endangered species are recorded in the heritage database. Heritage biologists are involved in planning, review and approval for each management prescription. RTE species protection and management are included in the Forest Management Plan, AWP Forest Harvest Proposal, and GIS. Monitoring efforts follow each management activity that could affect RTE species or their habitats including monitoring of the effects of restoration treatments.

4.2.2 Program to locate and protect known sites flora and fauna associated with viable occurrences of *critically imperiled* and *imperiled* species and communities also known as *Forests with Exceptional Conservation Value*. Plans for *protection* may be developed independently or collaboratively, and may include *Program Participant* management, cooperation with other stakeholders, or use of easements, *conservation* land sales, exchanges, or other *conservation* strategies.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

4.2.3 Support of and participation in plans or *programs* for the *conservation of old-growth forests* in the region of ownership or forest tenure.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed by review of written documents and maps. Review was not in detail.

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**Performance Measure 4.3**

*Program Participants* shall manage ecologically important sites in a manner that takes into account their unique qualities. Indicators:

4.3.1 Use of information such as existing natural heritage data or expert advice in identifying or selecting ecologically important sites for *protection*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed by review of written documents and maps. Review in the 2018 audit was not in detail.

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4.3.2 Appropriate mapping, cataloging and management of identified ecologically important sites.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed by review of written documents and maps. Review was not in detail.

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**Performance Measure 4.4**

*Program Participants* shall apply knowledge gained through research, science, technology and field experience to manage *wildlife habitat* and contribute to the *conservation of biological diversity*. Indicators:

4.4.1 Collection of information on *Forests with Exceptional Conservation Value* and other *biodiversity*-related data through *forest inventory* processes, mapping or participation in external *programs*, such as NatureServe, state or provincial heritage *programs*, or other credible systems. Such participation may include providing non-proprietary scientific information, time and assistance by staff, or in-kind or direct financial support.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

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4.4.2 A methodology to incorporate research results and field applications of *biodiversity* and ecosystem research into forest management decisions.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

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**Objective 5 Management of Visual Quality and Recreational Benefits**

To manage the visual impact of forest operations and provide recreational opportunities for the public.

**Performance Measure 5.1**

*Program Participants* shall manage the impact of harvesting on *visual quality*. Indicators:

5.1.1 Program to address visual quality management.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Visual management on the western state forests is not emphasized as much as it might be on other public lands because they are located in a region where most residents are familiar with timber harvesting. Regardless, foresters can and sometimes do designate visual buffers.

Variable retention technique considers aesthetics when deciding on location of clumped retention. Confirmed: MFS Policy & Procedure Manual section on "Visual Quality. Site visits did not identify any visual quality concerns.

5.1.2 Incorporation of aesthetic considerations in harvesting, road, landing design and management, and other management activities where visual impacts are a concern.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed by field observations. All forests have good visual management. Regeneration harvests on the Green Ridge State Forest are superb examples of variable retention for wildlife, biodiversity, and visual quality management.

**Performance Measure 5.2**

*Program Participants* shall manage the size, shape and placement of clearcut harvests. Indicators:

5.2.1 Average size of clearcut harvest areas does not exceed 120 acres (50 hectares), except when necessary to meet regulatory requirements, achieve ecological *objectives* or to respond to *forest health* emergencies or other natural catastrophes.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Very few clearcuts are done without retention, and these are quite small. Most of the larger, intensive harvests are regeneration harvests with significant levels of green-tree retention and advance regeneration. These appear more like heavy partial harvests. There were a total of 382 ac of clearcuts with an avg size of 29 ac.

That is 343.5 ac in the west, avg 31 ac and 38.2 ac on the Shore, avg 19 ac. The Shore has been doing almost all thinnings lately.

5.2.2 Documentation through internal records of clearcut size and the process for calculating average size.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: There were a total of 382 ac of clearcuts with an avg size of 29 ac.

**Performance Measure 5.3**

*Program Participants* shall adopt a *green-up requirement* or alternative methods that provide for *visual quality*. Indicators:

5.3.1 Program implementing the *green-up requirement* or alternative methods.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Field observations confirmed that adjacency and green-up requirements are met. GIS and planning system ensures that adjacent stands are not harvested. Regeneration program includes pre- and post-harvest regeneration checks.

5.3.2 Harvest area tracking system to demonstrate conformance with the *green-up requirement* or alternative methods.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: GIS tracks planned and completed harvests. Maps provided for each harvest (planned, on-going, or completed) demonstrate effective use of GIS and related tools to accurately map treatments at a fine scale with remarkable accuracy.

5.3.3 Trees in clearcut harvest areas are at least 3 years old or 5 feet (1.5 meters) high at the desired level of stocking before adjacent areas are clearcut, or as appropriate to address operational and economic considerations, alternative methods to reach the *performance measure* are utilized by the *Program Participant*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: There were no recent clearcuts observed during the 2018 audit, and older clearcuts were not adjacent to recent heavy cutting unless the trees in the older clearcut were at least 10 feet tall, and often much taller.

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#### Performance Measure 5.4

*Program Participants* shall support and promote recreational opportunities for the public. Indicator:

5.4.1 Provide recreational opportunities for the public, where consistent with forest management *objectives*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The MD DNR program exceeds the requirements for providing an exceptional range of high-quality recreational opportunities State Forests.

At each forest visited auditors observed numerous well-designed and maintained trails, campsites, recreation site parking areas, information signs, and kiosks. Brochures providing information on recreation opportunities are available for each forest. For example the "Maryland Savage River State Forest Trail Guide" covers hiking, camping, fishing, biking, hunting, and off-road vehicles.

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**Objective 6    Protection of Special Sites**

To manage lands that are geologically or *culturally important* in a manner that takes into account their unique qualities.

**Performance Measure 6.1**

*Program Participants* shall identify *special sites* and manage them in a manner appropriate for their unique features. Indicators:

6.1.1    Use of information such as existing natural heritage data, expert advice or stakeholder consultation in identifying or selecting *special sites* for *protection*.

N/A             Conforms             Exceeds             O.F.I.             Minor NC             Major NC

Audit Notes:    The MD DNR's use of information and expert advice or stakeholder consultation in the identification special sites for protection exceeds the requirements for this indicator.

On Savage River State Forest the Braddock Trail and nearby St Johns Rock are identified by informational signs, interpreted on posters at kiosks and/or brochures, and protected.

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6.1.2    Appropriate mapping, cataloging and management of identified *special sites*.

N/A             Conforms             Exceeds             O.F.I.             Minor NC             Major NC

Audit Notes:    Review of plans and GIS.

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**Objective 7 Efficient Use of Fiber Resources**

To *minimize* waste and ensure the efficient use of fiber resources.

**Performance Measure 7.1**

*Program Participants* shall employ appropriate forest harvesting technology and in-woods manufacturing processes and practices to *minimize* waste and ensure efficient utilization of harvested trees, where consistent with other *SFI Standard objectives*. Indicator:

7.1.1 *Program* or monitoring system to ensure efficient utilization, which may include provisions to ensure:

- a. management of harvest residue (e.g., slash, limbs, tops) considers economic, social and environmental factors (e.g., organic and nutrient value to future forests and the potential of increased fuels build-up) and other utilization needs;
- b. training or incentives to encourage loggers to enhance utilization;
- c. exploration of markets for underutilized species and low-grade wood and alternative markets (e.g., bioenergy markets); or
- d. periodic inspections and reports noting utilization and product separation.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: Markets include pulp, logs, bridge ties, domestic firewood (non-commercial by permit only).

All loggers must be Master Logger Certified. Logging contracts include provisions for utilization. Utilization may be customized for a site based on forester's decisions, most are standardized. Contract Attachment D, DNR Timber Sale Contract No. PG-05-15 "5. **Utilization** – All timber must be removed to a 4" top except where it is impossible to secure an 8' log." Other contracts reviewed (at SRSF and GRSF) also included this clause.

Foresters inspect active harvests regularly, as often as 2-3 times per week, and consider utilization at the time of inspection. In the western forests challenging markets and harvesting conditions (steep and often rocky land, harvest units located far from high-speed highways) result in economic limits to full utilization of pulpwood).

Forest managers in the eastern forests are working with consuming mills to develop and maintain market access.

2017: MD DNR Forest Service Cutting Exam Checklist used on Potomac Garrett State Forest (and similar forms used at SRSF and GRSF) includes the criterion "Utilization".

Foresters in all units regularly visit harvest sites and perform formal inspections that include utilization checks (stump height).

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**Objective 8 Recognize and Respect *Indigenous Peoples'* Rights**To recognize and respect *Indigenous Peoples'* rights and traditional knowledge.**Performance Measure 8.1**

Program Participants shall recognize and respect Indigenous Peoples' rights. Indicator:

8.1.1 *Program Participants* will provide a written *policy* acknowledging a commitment to recognize and respect the rights of *Indigenous Peoples*. N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NCAudit Notes: Not reviewed during the April 2018 third-party audit.

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**Performance Measure 8.2***Program Participants* with forest *management responsibilities on public lands* shall confer with affected *Indigenous Peoples* with respect to sustainable forest management practices. Indicator:8.2.1 *Program* that includes communicating with affected *Indigenous Peoples* to enable *Program Participants* to:

- a. understand and respect traditional forest-related knowledge;
- b. identify and protect spiritually, historically, or culturally important sites;
- c. address the use of non-timber forest products of value to Indigenous Peoples in areas where Program Participants have management responsibilities on public lands; and
- d. respond to Indigenous Peoples' inquiries and concerns received.

 N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NCAudit Notes: Not reviewed during the April 2018 third-party audit.

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**Performance Measure 8.3***Program Participants* are encouraged to communicate with and shall respond to local *Indigenous Peoples* with respect to sustainable forest management practices on their private lands. Indicators:8.3.1 *Program Participants* are aware of *traditional forest-related knowledge*, such as known cultural heritage sites, the use of wood in traditional buildings and crafts, and flora that may be used in cultural practices for food, ceremonies or medicine. N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NCAudit Notes: This program does not manage private lands.

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8.3.2 Respond to *Indigenous Peoples'* inquiries and concerns received. N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NCAudit Notes: This program does not manage private lands.

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## Objective 9 Legal and Regulatory Compliance

To comply with applicable federal, provincial, state and local laws and regulations.

### Performance Measure 9.1

*Program Participants* shall comply with applicable federal, provincial, state and local *forestry* and related social and environmental laws and regulations. Indicators:

9.1.1 Access to relevant laws and regulations in appropriate locations.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

9.1.2 System to achieve compliance with applicable federal, provincial, state, or local laws and regulations.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

9.1.3 Demonstration of commitment to legal compliance through *available regulatory action information*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

### Performance Measure 9.2

*Program Participants* shall take appropriate steps to comply with all applicable social laws at the federal, provincial, state and local levels in the country in which the *Program Participant* operates. Indicators:

9.2.1 Written *policy* demonstrating commitment to comply with social laws, such as those covering civil rights, equal employment opportunities, anti-discrimination and anti-harassment measures, workers' compensation, *Indigenous Peoples'* rights, workers' and communities' right to know, prevailing wages, workers' right to organize, and occupational health and safety.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

9.2.2 *Forestry enterprises* will respect the rights of workers and labor representatives in a manner that encompasses the intent of the International Labor Organization (ILO) core conventions.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

**Objective 10 Forestry Research, Science and Technology**

To invest in *forestry* research, science and technology, upon which sustainable forest management decisions are based and broaden the awareness of *climate change* impacts on forests, *wildlife* and *biological diversity*.

**Performance Measure 10.1**

*Program Participants* shall individually and/or through cooperative efforts involving *SFI Implementation Committees*, associations or other partners provide in-kind support or funding for forest research to improve *forest health, productivity* and sustainable management of forest resources, and the environmental benefits and performance of forest products. Indicators:

10.1.1 Financial or in-kind support of research to address questions of relevance in the region of operations. Examples could include, but are not limited to, areas of forest *productivity*, water quality, biodiversity, community issues, or similar areas which build broader understanding of the benefits and impacts of forest management.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Savage River State Forest has been used for research into Chestnut blight for many decades. Presentations by Dr. Matt Kasson, Amy Metheny, working with Dr. Bill MacDonald, West Virginia University: "Field Testing of Genetically Modified Strains of the Chestnut Blight Fungus in the Savage River State Forest"; 2 field studies.

10.1.2 Research on genetically engineered trees via *forest tree biotechnology* shall adhere to all applicable federal, state, and provincial regulations and international protocols ratified by the United States and/or Canada depending on jurisdiction of management.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Maryland DNR Forest Service does not participate in research on genetically engineered trees.

**Performance Measure 10.2**

*Program Participants* shall individually and/or through cooperative efforts involving *SFI Implementation Committees*, associations or other partners develop or use state, provincial or regional analyses in support of their *sustainable forestry programs*. Indicator:

10.2.1 Participation, individually and/or through cooperative efforts involving *SFI Implementation Committees* and/or associations at the national, state, provincial or regional level, in the development or use of some of the following:

- a. regeneration assessments;
- b. growth and drain assessments;
- c. *best management practices* implementation and conformance;
- d. *biodiversity conservation* information for family forest owners; and
- e. social, cultural or economic benefit assessments.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: Potomac Garrett State Forest- interviewed staff.

Economic Benefit Assessment: Frostburg University is conducting a study of the economic impact of the recreational activities on the western Maryland state forests, including efforts to determine uses, demographic information about users, and how this impacts the local economies. Grant funding is from the Appalachian Regional Commission (rural-oriented, multi-state) and the Maryland Heritage Organization. Forest managers support the survey collection and polling, including office staff involvement in promoting completion of questionnaires.

Fire-Learning Network was joined 2016. TNC leads this effort, and selected foresters have participated. Some managers are involved in regional cultural assessments.

Reviewed the report "Methodology for Locating Representative Sample Areas (RSA) for Naturally Occurring Ecosystems within the Region of Maryland State Forests". This analysis used LANDFIRE ecosystem data for regions established around Maryland's State Forests to assess the presence of various ecosystems in the landscape and compare them to protected areas within the state forests and within the surrounding landscapes. A program has been developed to meet this indicator, which the state must meet to secure FSC certification:

*FSC C 6.4: Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.*

“RSAs have been designated on Savage River State Forest and are protected in their natural state.”

On Savage River State Forest Management Layers have been designated:

Designation	Acres	Percent of SRSF
General	35,394	64.8
Wildlands	13,339	24.4
Ecologically Significant Areas	3,887	7.1
Wetlands of Special State Concern	202	0.3
Forested Riparian Buffers	1,772	3.2
Old Growth Ecosystem Mgt. Areas	13,199	24.2

**Performance Measure 10.3**

Program Participants shall individually and/or through cooperative efforts involving SFI Implementation Committees, associations or other partners broaden the awareness of climate change impacts on forests, wildlife and biological diversity. Indicators:

10.3.1 Where available, monitor information generated from regional climate models on long-term forest health, productivity and economic viability.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Jack Perdue monitors such information. Field foresters could be more aware of the general situation.

10.3.2 Program Participants are knowledgeable about climate change impacts on wildlife, wildlife habitats and conservation of biological diversity through international, national, regional or local programs.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: While staff and management were knowledgeable, many field foresters could not consistently describe predicted climate change directions and potential biodiversity impacts.

There is an Opportunity for Improvement in the knowledge of field foresters on climate change impacts on wildlife, wildlife habitats and conservation of biological diversity.

## Objective 11 Training and Education

To improve the implementation of *sustainable forestry* practices through appropriate training and education *programs*.

### Performance Measure 11.1

*Program Participants* shall require appropriate training of personnel and contractors so that they are competent to fulfill their responsibilities under the *SFI 2015-2019 Forest Management Standard*. Indicators:

11.1.1 Written statement of commitment to the *SFI 2015-2019 Forest Management Standard* communicated throughout the organization, particularly to facility and woodland managers, and field foresters.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

11.1.2 Assignment and understanding of roles and responsibilities for achieving *SFI 2015-2019 Forest Management Standard objectives*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

11.1.3 Staff education and training sufficient to their roles and responsibilities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Reviewed staff training records at the Potomac Garrett State Forest office for John Denning, Forest Manager and for Noah Rawe, Forest Technician which included records of a variety and depth of training consistent with their responsibilities. John Denning has a Pesticide Applicator Registration.

11.1.4 Contractor education and training sufficient to their roles and responsibilities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

11.1.5 *Program Participants* shall have written agreements for the use of *qualified logging professionals* and/or *certified logging professionals* (where available) and/or *wood producers* that have completed training *programs* and are recognized as *qualified logging professionals*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: Potomac Garrett State Forest - DNR Timber Sale Contract No. PG-05-15 includes "**Attachment B**" that states the requirement that the bidder be "DNR licensed Forest Product Operators and possess and maintain active status as a Maryland Master Logger for the duration of the contract." Other contracts reviewed (at SRSF and GRSF) also included this clause.

**Performance Measure 11.2**

*Program Participants shall work individually and/or with SFI Implementation Committees, logging or forestry associations, or appropriate agencies or others in the forestry community to foster improvement in the professionalism of wood producers.*

Indicators:

- 11.2.1 Participation in or support of *SFI Implementation Committees* to establish criteria and identify delivery mechanisms for *wood producer* training courses and periodic continuing education that address:
- a. awareness of sustainable forestry principles and the SFI program;
  - b. best management practices, including streamside management and road construction, maintenance and retirement;
  - c. reforestation, invasive exotic plants and animals, forest resource conservation, aesthetics and special sites;
  - d. awareness of responsibilities under the U.S. Endangered Species Act, the Canadian Species at Risk Act, and other measures to protect wildlife habitat (e.g., Forests with Exceptional Conservation Value);
  - e. awareness of rare forested natural communities as identified by provincial or state agencies, or by credible organizations such as NatureServe, The Nature Conservancy, etc.
  - f. logging safety;
  - g. U.S. Occupational Safety and Health Administration (OSHA) and Canadian Centre for Occupational Health and Safety (CCOHS) regulations, wage and hour rules, and other provincial, state and local employment laws;
  - h. transportation issues;
  - i. business management;
  - j. public policy and outreach; and
  - k. awareness of emerging technologies.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: All loggers must be Master Logger Certified.

The MD DNR Forest Service SIC support goes to help fund the U of MD Coop Ext position that operates the statewide Master Logger Program.

The MD DNR Forest Service contribution to the Maryland SFI Implementation Committee is \$8,000/year. It had been \$6k in FY2014 and has been gradually increased to \$8k/year where it is planned to level off. I had reported that in the SFI annual report.

Ken Jolly is MFS rep on the SIC.

- 11.2.2 The *SIC-approved wood producer training programs* shall have a continuing education component with coursework that supports the current training *programs*, safety and the *principles of sustainable forestry*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: To gain Active Master Logger status, program participants must initially complete four four-hour core courses within two years, and submit proof of current First Aid and CPR training.

The four core courses are:

- OSHA Regulations and Logging Safety
- Sustainable Forestry I: Sediment and Erosion Control, Spill Cleanup and Prevention, Logging Aesthetics
- Sustainable Forestry II: Basic Forestry and Silviculture, Forest Certification
- Sustainable Forestry III: Threatened and Endangered Species, Logger Activism

Regular updates are also required.

- 11.2.3 Participation in or support of *SFI Implementation Committees* to establish criteria for recognition of logger certification *programs*, where they exist, that include:
- a. completion of *SFI Implementation Committee* recognized logger training *programs* and meeting continuing education requirements of the training *program*;
  - b. independent in-the-forest verification of conformance with the logger certification *program* standards;
  - c. compliance with all applicable laws and regulations including responsibilities under the U.S. Endangered Species Act, the Canadian Species at Risk Act and other measures to protect *wildlife habitat*;
  - d. use of *best management practices* to protect water quality;
  - e. logging safety;
  - f. compliance with acceptable *silviculture* and utilization standards;
  - g. aesthetic management techniques employed where applicable; and
  - h. adherence to a management or harvest plan that is site specific and agreed to by the forest landowner.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: There is no logger certification program in Maryland; the Maryland Master Logger Program fits the description under 11.2.1 above.

## Objective 12 Community Involvement and Landowner Outreach

To broaden the practice of *sustainable forestry* through public outreach, education, and involvement, and to support the efforts of *SFI Implementation Committees*.

### Performance Measure 12.1

*Program Participants* shall support and promote efforts by consulting foresters, state, provincial and federal agencies, state or local groups, professional societies, *conservation* organizations, *Indigenous Peoples* and governments, community groups, sporting organizations, labor, universities, extension agencies, the *American Tree Farm System*® and/or other landowner cooperative programs to apply *principles* of sustainable forest management. Indicators:

12.1.1 Support, including financial, for efforts of *SFI Implementation Committees*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The MD DNR Forest Service contribution to the Maryland SFI Implementation Committee is \$8,000/year. It had been \$6k in FY2014 and has been gradually increased to \$8k /year where it is planned to level off. Ken Jolly is MFS rep on the SIC.

12.1.2 Support, individually or collaboratively, education and outreach to forest landowners describing the importance and providing implementation guidance on:

- a. best management practices;
- b. reforestation and afforestation;
- c. visual quality management;
- d. conservation objectives, such as critical wildlife habitat elements, biodiversity, threatened and endangered species, and Forests with Exceptional Conservation Value;
- e. management of harvest residue (e.g., slash, limbs, tops) considers economic, social, environmental factors (e.g., organic and nutrient value to future forests) and other utilization needs;
- f. control of invasive exotic plants and animals;
- g. characteristics of *special sites*; and
- h. reduction of wildfire risk.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

12.1.3 Participation in efforts to support or promote *conservation* of managed forests through voluntary market-based incentive programs such as current-use taxation programs, *Forest Legacy Program* or *conservation* easements.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

### Performance Measure 12.2

*Program Participants* shall support and promote, at the state, provincial or other appropriate levels, mechanisms for public outreach, education and involvement related to sustainable forest management. Indicator:

12.2.1 Periodic educational opportunities promoting *sustainable forestry*, such as

- a. field tours, seminars, websites, webinars or workshops;
- b. educational trips;
- c. self-guided forest management trails;
- d. publication of articles, educational pamphlets or newsletters; or
- e. support for state, provincial, and local *forestry* organizations and soil and water *conservation* districts.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.



**Performance Measure 12.3**

*Program Participants* shall establish, at the state, provincial, or other appropriate levels, procedures to address concerns raised by loggers, consulting foresters, employees, unions, the public or other *Program Participants* regarding practices that appear inconsistent with the *SFI Standard principles* and *objectives*. Indicators:

12.3.1 Support for *SFI Implementation Committees* (e.g., toll-free numbers and other efforts) to address concerns about apparent nonconforming practices.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

12.3.2 Process to receive and respond to public inquiries. *SFI Implementation Committees* shall submit data annually to *SFI Inc.* regarding concerns received and responses.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: Potomac Garrett State Forest maintains a log of communications and complaints including date, time, initials of staff recording information, contact information for source, complaint, and resolution, whether closed. This was reviewed and shows 8 complaints since 2011, or about 1 annually. All but the most recent (logged 8 days previously) have been addressed.

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**Objective 13 Public Land Management Responsibilities**

To participate and implement sustainable forest management on *public lands*.

**Performance Measure 13.1**

*Program Participants* with forest management responsibilities on *public lands* shall participate in the development of *public land* planning and management processes. Indicators:

13.1.1 Involvement in *public land* planning and management activities with appropriate governmental entities and the public.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

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13.1.2 Appropriate contact with local stakeholders over forest management issues through state, provincial, federal or independent collaboration.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not reviewed during the April 2018 third-party audit.

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## Objective 14 Communications and Public Reporting

To increase transparency and to annually report progress on conformance with the *SFI Forest Management Standard*.

### Performance Measure 14.1

A *Program Participant* shall provide a summary audit report, prepared by the *certification body*, to *SFI Inc.* after the successful completion of a certification, recertification or surveillance audit to the *SFI 2015-2019 Forest Management Standard*. Indicator:

- 14.1.1 The summary audit report submitted by the *Program Participant* (one copy must be in English), shall include, at a minimum,
- a description of the audit process, *objectives* and scope;
  - a description of substitute *indicators*, if any, used in the audit and a rationale for each;
  - the name of *Program Participant* that was audited, including its *SFI* representative;
  - a general description of the *Program Participant's* forestland included in the audit;
  - the name of the *certification body* and *lead auditor* (names of the *audit team* members, including *technical experts* may be included at the discretion of the *audit team* and *Program Participant*);
  - the dates the audit was conducted and completed;
  - a summary of the findings, including general descriptions of evidence of conformity and any nonconformities and corrective action plans to address them, opportunities for improvement, and exceptional practices; and
  - the certification decision.

The summary audit report will be posted on the *SFI Inc.* website ([www.sfiprogram.org](http://www.sfiprogram.org)) for public review.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: These reports contain the required information and are posted on the SFI Inc. website ([www.sfiprogram.org](http://www.sfiprogram.org)):

April 2014 Re-certification Audit Maryland NSF-ISR

April 2017 Surveillance Audit - FM Maryland NSF-ISR

### Performance Measure 14.2

Program Participants shall report annually to SFI Inc. on their conformance with the SFI 2015-2019 Forest Management Standard. Indicators:

- 14.2.1 Prompt response to the *SFI* annual progress report survey.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Per SFI Inc.

- 14.2.2 Record keeping for all the categories of information needed for *SFI* annual progress report surveys.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Maryland Forest Service demonstrated robust and detailed record-keeping procedures during the audit.

- 14.2.3 Maintenance of copies of past survey reports to document progress and improvements to demonstrate conformance to the *SFI 2015-2019 Forest Management Standard*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Reports are kept in files, and those back through 2009 are kept on-line. Witnessed past reports.

**Objective 15 Management Review and Continual Improvement**

To promote continual improvement in the practice of *sustainable forestry* by conducting a management review and monitoring performance.

**Performance Measure 15.1**

*Program Participants* shall establish a management review system to examine findings and progress in implementing the *SFI 2015-2019 Forest Management Standard*, to make appropriate improvements in *programs*, and to inform their employees of changes.

Indicators:

15.1.1 System to review commitments, *programs* and procedures to evaluate effectiveness.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: All forests conduct and document regular logging inspections & seedling survival/regeneration counts. Monitoring of ESA restoration projects by Natural Heritage Commission.

Interdisciplinary Teams conduct Annual Work Plan reviews for all projects.

The web page for the state forests (<http://dnr.maryland.gov/forests/Pages/mdforests.aspx>) provides links to monitoring information for each forest.

Chapter – 10 Potomac Garrett State Forest Monitoring Plan (page 148).

Chapter – 10 Savage River State Forest Monitoring Plan (page 135).

Internal Silvicultural Audit (ISA) process is part of the system.

15.1.2 System for collecting, reviewing, and reporting information to management regarding progress in achieving *SFI 2015-2019 Forest Management Standard objectives and performance measures*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: 2018: The document “InternalReview-ISA-FIELD-CHECKLIST-ALL-SF-2018” documents the Internal Silvicultural Audit 2018.

(Tuesday April 3 — Green Ridge State Forest; Wednesday April 4 — Potomac Garrett State Forest; Thursday April 5 — Savage River State Forest; and Thursday April 13 — Chesapeake Forest and Pocomoke State Forest. The report consists of 16 completed review checklists of “AWP Forest Harvest Proposals”.

15.1.3 Annual review of progress by management and determination of changes and improvements necessary to continually improve conformance to the *SFI 2015-2019 Forest Management Standard*.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

Audit Notes: 2018: The “State Forest Managers Meeting on September 13, 2017 attended by the leadership team, central office staff, district foresters, and state forester managers included topics comprising the management review, including:

1. MDA forest pests update
2. Feed-A-Bee grants
3. Western Maryland state forests conifer component - Rob Feldt
4. AWP updated acres
5. HCVF redefined / re-evaluation
6. CAC - policy review; member representative categories review; member appointments, status, changes, and removals; un-appointed nonmember involvement
7. MFS Volunteer webpage (dropped)
8. SFI 1.1.1.d. - biodiversity at landscape scales
9. Project Review - SFM discretion
10. Sustainable Forest Management Plan updates
11. Interdisciplinary Team (IDT) procedural modifications
12. State Forest Annual Summary Report
13. Timber Sales Online review
14. Forest Certification
  - Review of certification standards & compliance
  - 2016-17 CARS/OBS/OFI Review
  - 2016 Obs / 2017 Minor CAR: ESA site level plans Western MD
    - Meetings with Natural Heritage Program
  - 2016 Obs / 2017 Minor CAR: Historic role of conifers WMD
    - Addendum to SFMPs
  - 2016 Obs: Funding for trails (closed)
  - 2017 Major CAR: Use of Trademarks (closed)
  - SFI annual reporting — deadline to SFI March 31
  - 2018 Auditor expectations
15. State Forest Metrics & Quarterly Reports
16. REMINDER: AWP approval procedures (no printed copy, just signature page)
17. Next audit – Week of April 23 — Western Maryland
18. State Forests Internal Silvicultural Audit — GR (4/3) PG (4/4) SR (4/5) ES (4/11)
19. Next SFM meeting date

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(End SFI Forest Management Checklist)

## Appendix 4

### Site Visit Notes

April 24- Tuesday: Potomac-Garret State Forest (PGSF)						
Location (AWP-codification)	FY	Notes	Contract	Managed Acres	Harvest Acres	Silvicultural Prescription
(PG-2015-S-01) Eagle Rock – Comp 16-21 & Comp 23	2015	Tributary through center of area, 27 acre, SMZ is 50' buffer +4' every 1% grade, no equipment/no cut, in plantation setting. Some damage to residual trees.	PG-05-15	27	26	Habitat Improvement Thinning
PG-2016-S-05 Wallman Comp 26-5	2016	Shelterwood, marked trees to cut. Some left over trees marked for cut, DNR staff addressed with logger, who reported market concerns, considered an acceptable reason within DNR's system.	PG-01-16	90	35	Shelterwood
PG-2016-S-04 Wallman Comp 25-30	2016	Shelterwood in ESA. Most ESAs are set-asides. This one set up due to Goshawk presence about 10 years ago (uncommon for Maryland). Met w heritage biologist who oversees raptor program. Heritage designated as critical habitat for Goshawk in southern range. Forest managers recommending treating midstory to open for Goshawk flight. Departments of Wildlife and Heritage staff helped in layout and marking of trees for harvest. US thinning from below	PG-05-16	26	23	Shelterwood
PG-2019-S-06-Snaggy Comp 33-6	2019	Thinned in 2012, lots of travel in area by foresters for other activities. Over winter in developing next year annual work plan, tag those thinned w/in last 5 years. Activity scheduled to monitor for oak regen. Typically will release oak regen when noted.	PG-02-18	11	11	Clear-cut with var.retention
PG-2018-S-07-Snaggy-Comp 41-8	2018	Hack & spray, 18 acre treatment to remove undesired stems and encourage regeneration.	n/a	33	20	Understory Control
PG-2018-S-05-Snaggy-Comp 39-12	2018	Site assessed as having very good regeneration. Overstory removal being planned to release abundant regeneration.	n/a	16	13	Understory Control

**April 25- Wednesday: Savage River State Forest (SRSF)**

Location (AWP-codification)	FY	Notes	Contract	Managed Acres	Harvest Acres	Silvicultural Prescription
St Johns Rock ORV Trail, Parking Lot, and Campground		Opened last year, this new ORV trail system has been carefully-designed and built to balance site protection, durability, ease of maintenance, and desired user experience.				
Braddock Road Historic Trail		This pre-revolutionary war historic trail is protected and interpreted.				
(SR-2017-S-6) Comp 1 Stands 40/42	2017	Completed hardwood thinning in a well-stocked Northern hardwood-Oak stand lacking advanced regeneration. Confirmed high-quality timber harvest on a sloping, rocky site. Residual stand has very little logging damage. Slash and water bars have stabilized skid roads. A regeneration review in 4-5 years may allow foresters to change next planned entry if expected (but not required) sugar maple regeneration occurs.	SR-04-17	53	43	Thinning
Forest Access Road		Class 3, Status 2				
(SR-2017-S-9) Comp 11 Stand 1	2017	Completed shelterwood establishment harvest following herbicide treatment of woody vegetation from 0.5 to 4 inches dbh and selected patches of interfering sedge/grass/fern layer. The waterbars were adequate but could have been better-constructed; despite many weeks of abnormally-wet weather the road has not washed out. Two crossings of small wet swales were challenging but stable, with minimal amounts of silt visible in the water.	SR-2017-S-9	66	63	Shelterwood
(SR-2018-S-1) Comp 11 Stand 21	2018	Completed thinning		21	21	Thinning
(SR-2016-S-21) Margroff Place – Comp 14 Stand 36	2016	Completed thinning of an overstocked 65 year-old Norway spruce plantation. Spruce seedlings, most less than 2 feet tall, were noted but are not yet factored into silvicultural decisions because the forest hasn't developed a policy to promote them, although they are tolerated.	SR-01-16	13	13	Thinning
(SR-2016-S-22) Margroff Place – Comp 14 Stand 52	2016	Completed thinning of an overstocked mixed conifer-hardwood stand dominated by Norway Spruce, red oak and black cherry. The mountain bike trail was closed during the harvest. The trail is now open, and bikers have incorporated some of the available logging slash into the trail experience (for ramps/jumps).	SR-01-16	5	5	Thinning

(SR-2017-S-4) Comp 13 Stand 7	2017	Completed overstory removal with variable retention of 4-8 trees per acre selected mostly for wildlife habitat. Existing switchbacked skid roads have been stabilized using slash, water barred, and seeding. Spur access road graveled and in very good condition, with functioning drainage provisions	SR-07-16	13		Overstory Removal
(SR-2017-S-4) Comp 13 Stand 13	2017	Completed shelterwood establishment harvest following herbicide treatment of woody vegetation from 0.5 to 4 inches dbh and selected patches of interfering sedge/grass/fern layer. Also reviewed the access spur road, which is in good condition with drainage provisions working.	SR-07-16	8		Shelterwood Preparatory Cut
Negro Mountain Trail		\$30,000 recreational trail grant (this is a snowmobile trail that also serves as a forest access road for management and harvesting) and previous additions of gravel were reviewed. Trail/road is in excellent condition				
(SR-03-18) Comp 7 Stands 38 & 43		These stands had been heavily thinned in 2001, serving as the seed cut/establishment stage and providing sufficient regeneration to merit overstory removal. The wood has been sold but not harvested, allowing review of the trees selected by foresters for retention and for removal. Retained trees are dominant or co-dominant or have wildlife features.	SR-03-18	45	43	Overstory Removal with Variable Retention
(SR-2017-S-10) Comp 72 Stand 5		Completed thinning along New Germany Road. Culverts draining state road place sufficient water that the planned buffers were enlarged, based on guidance from Maryland Department of ? Logging practices protected this sensitive site and the residual stand occupying it.		23	18	
(SR-2017-S-11) Comp 72 Stand 10		Completed thinning along New Germany Road. Culverts draining state road place sufficient water that the planned buffers were enlarged, based on guidance from Maryland Department of ? Site of temporary bridge (now removed) indicates that the bridge protected the intermittent drainage including banks without any impacts to water quality.		37	23	
Oldtown Orleans Road (GR-2017-S- )	2017	Mixed oak type. Completed variable retention harvest marked to keep co-dominants favoring quality white oaks, target 20 sq. feet/acre basal area. Last thinning done in 1990s. Discussion - Markets include pulp, logs, bridge ties, domestic firewood (non-commercial by permit only). SMZs along edges were inspected. SMZs reserved following BMPs. Result in both clustered and dispersed retention. Note: ginseng harvests have been banned in all SF.	GR-03-17	69	43.5	Variable Retention
Howard Road (GR-2015-S )	2015	Retention dispersed and clumped. SMZs along creeks along both edges of harvest area. Retained co-dominant WO throughout stand. Removed most overstory.	GR-07-16	32	21.5	Variable Retention



(unscheduled)		Thinning done 3-4 years ago at 44 years old. Mixed oak marked to keep.	Adjacent GR-07-16			
Mertens Ave (GR-2016-S- )	2016	Recently completed VRT, retaining large co-dominants favoring quality white oak. SMZs inspected.	GR-03-16	73	46	Variable Retention
Potomac Bends Wildlands, Mertens/Outdoor Club Road. HCVF (unscheduled)		ESA for rattlesnakes and shield barrens.	Adjacent GR-03-16			
Oldtown Orleans Road (GR-2017-S- )	2017	Mixed oak and some pine. Marked not yet cut. VRT retaining marked co-dominants of mixed-oak. HCVF/SMZs	GR-06-17	66	27	Variable Retention
Oldtown/Orleans (GR-2015-S- )	2015	120 year old mixed oak stand. Completed VRT retaining marked white and scarlet oak.	GR-02-17	34	16	Variable Retention

**April 26 - Thursday: Green Ridge State Forest (GRSF)**

Location (AWP-codification)	FY	Notes	Contract	Managed Acres	Harvest Acres	Silvicultural Prescription
Oldtown Orleans Road (GR-2017-S- )	2017	Mixed oak type. Completed variable retention harvest with roadside visual uncut buffer and uncut buffers along streams and mid-sale ravine. Contract requires all felling of all unmarked (unreserved) trees 2 inches dbh and larger. Reserve trees are painted by the forester, focusing on desirable, long-lived species such as co-dominant White oak and seed and fruit-producing species, of varied sizes, target 20 sq. feet/acre basal area. Last thinning done in 1990s. SMZs along edges were inspected. SMZs reserved following BMPs. Result in both clustered and dispersed retention.	GR-03-17	69	43.5	Variable Retention
Howard Road (GR-2015-S )	2015	Completed variable retention harvest (retention dispersed and clumped) with uncut buffers along streams that form two of the harvest unit's boundaries. Contract requires felling of all unmarked (unreserved) trees 2 inches dbh and larger. Reserve trees are painted by the forester (except white pine and serviceberry which are designated for retention), focusing on desirable, long-lived species such as White oak (retained co-dominant, full-crowned white oak throughout stand) and seed and fruit-producing species, of varied sizes. Superb example of variable retention for wildlife, biodiversity, and visual quality management.	GR-07-16	32	21.5	Variable Retention
(unscheduled)		Thinning done 3-4 years ago at 44 years old. Mixed oak marked to keep.	near GR-07-16			
Mertens Ave (GR-2016-S- )	2016	Recently completed VRT, retaining large co-dominants favoring quality white oak. SMZs inspected.	GR-03-16	73	46	Variable Retention
Potomac Bends Wildlands, Mertens-Outdoor Club Road. HCVF (unscheduled)		ESA for rattlesnakes and shield barrens.	Adjacent GR-03-16			
Oldtown Orleans Road (GR-2017-S- )	2017	Mixed oak and some pine. Marked not yet cut. VRT retaining marked co-dominants of mixed-oak. HCVF/SMZs	GR-06-17	66	27	Variable Retention
Oldtown/Orleans (GR-2015-S- )	2015	120-year-old mixed oak stand. Completed VRT retaining marked white and scarlet oak.	GR-02-17	34	16	Variable Retention

Appendix 5

## Meeting Attendance

Company Name: Maryland DNR Forest Service

Location: Maryland State Forest System

Type of Audit: Surveillance (Annual)

Opening Meeting Date: April 24, 2018 Closing Meeting Date: April 26, 2018

Maryland Forest Service  
 Forest Certification Audit Review  
 Savage River State Forest – Wednesday, April 25, 2018

Name	Affiliation
1. Scott Campbell	MFS - Savage River State
2. Michael Johnson	MFS - Savage River State
3. Noah Kauer	MFS - Patuxent (North) Site
4. Vanessa Foy	MFS - SRSF
5. Charles L. Bayle	SRSF
6. [Handwritten]	SRSF
7. [Handwritten]	SRSF
8. Ashley Moreland	SRSF
9. Mark Beals	MFS - GRSE
10. Jesse Morgan	MFS - GRSE
11. John Denning	MFS - ABCF
12. [Handwritten]	OUS
13. [Handwritten]	MFS
14. [Handwritten]	MFS SAVAGE RIVER
15. [Handwritten]	MFS
16. Alexander Clary	MFS CFCRSE
17. M. For. Schmitt	MFS
18. [Handwritten]	MFS
19. Kenneth Jolly	MFS
20. [Handwritten]	MFS
21. [Handwritten]	MFS
22.	

POTOMAC-GARRETT STATE FOREST  
 CERTIFICATION AUDIT TOUR  
 APRIL 24, 2018

NAME	UNIT
Joyce Stoner	Forest Service
Jim A	Forest Service
Shawn Steiner	Forest Service
George Eberly	MFS
June Morgan	MFS
STAN NOLAN	MFS
Beth Tacarrone	S & S
Kenneth Tally	MFS
Jack Perdue	MFS
Rob Felty	MFS
Kip Pavlen	MFS
Mike Ferrucci	NSF
Rock Beale	MFS
Noah Kane	MFS
Bo Sliger	MFS
Alexander Clark	MFS
Mike Schatz	MFS
Scott Campbell	MFS
John Denning	MFS
Jason SARGENT	MFS



**MARYLAND**  
DEPARTMENT OF  
NATURAL RESOURCES

Larry Hogan, Governor  
Boyd Rutherford, Lt. Governor  
Mark Belton, Secretary  
Joanne Throws, Deputy Secretary

**Green Ridge State Forest**  
**2018 FSC/SFI Surveillance Audit**  
**April 26, 2018**  
**Attendees**

Name	Affiliation
Jesse Morgan	MD DNR Forest Service
Mark Beals	MD DNR Forest Service
Jack Ford	" " "
George Eberly	MFS
Scott Campbell	MFS
Noah Rowe	MFS
SEAN NOLAN	MFS
John Denning	MFS-PB&F
Kenneth Jolly	MFS
Mike Ferrucci	NSF
Brian Jacorin	SCS

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**Appendix 6****Checklist for SFI® Section 9, Appendix 1: Audits of Multi-Site Organizations**

0Y301 Maryland DNR Forest Service

Date of audit: April 24-26, 2018

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**3 Terms and Definitions**

- 3.1 Organization:** The term organization is used to designate any company or other organization owning a management system subject to audit and certification.
- 3.2 Site:** A site is a permanent location where an organization carries out work or a service.
- 3.3 Multi-Site Organization:** An organization having an identified central function (hereafter referred to as a central office – but not necessarily the headquarters of the organization) at which certain activities are planned, controlled or managed and a network of local offices or branches (sites) at which such activities are fully or partially carried out.
- 3.4 Group Certification Organization:** A specific type of multi-site organization where forest owners, forest owners' organizations, forest managers, forest products manufacturers or forest products distributors without a pre-existing legal or contractual link can form a group for the purposes of achieving certification and gaining eligibility for a sampling approach to certification audits.
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For audits of conformance with SFI Section 4 in the SFI 2015-2019 Standards and Rules document, multi-site organizations using either IAF-MD1 or alternate approaches to sampling shall ensure that all the relevant sites (including the central function) are subject to the organization's internal audit program and shall have been audited in accordance with that program prior to the certification body starting its assessment. (Section 9, Requirement 4.1.5 Audit Procedures)

**Note:** Communicate with NSF Project Manager to confirm.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Internal audit checklist and management review provided by MD DNR.

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**4.1 Eligibility Criteria / Method of Sampling (choose 1)**

- Eligibility criteria established in IAF-MD1: **Use Sub-Checklist 9-1-A** below.
- Alternative Approaches to sampling provided for in Section 9, Subsection 5.2 of the Audit Procedures and Auditor Qualifications and Accreditation document: **Use Sub-Checklist 9-1-B** below.
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**Sub-Checklist 9-1-A: Eligibility Criteria Established in IAF-MD1**

**Applicable**       **Not Applicable**

4.1.1 Multi-site organizations using IAF-MD1 as the basis for sampling shall meet the eligibility criteria established in IAF-MD1, including, but not limited to, the following:

a. The processes at all sites have to be substantially of the same kind and have to be operated to similar methods and procedures.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Sites are the individual state forests; all conduct the same activities: forest management, wildlife management, biodiversity protection, and recreation.

b. The organization’s management system shall be under a centrally controlled and administered plan and be subject to central management review and all relative sites (including the central administration function) shall be subject to the organization’s internal audit program.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The management system is centrally-managed by the state forester Jack Perdue, Maryland DNR Forest Service from his offices at 580 Taylor Avenue, Annapolis, MD. Notes from internal audits and interviews confirm that all sites participate in the internal audits.

c. It shall be demonstrated that the central office of the organization has established a management system in accordance with the SFI 2015-2019 Standards and that the whole organization meets the requirements of the standard.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Interviewed Jack Perdue about the state forest manual and Jack and the forestry staff about the internal audit process. The 2018 internal audits were conducted the week of April 13, 2018, with one day spent on each forest.

- d. The organization should demonstrate its ability to collect and analyze data (including, but not limited to, the items listed below) from all sites including the central office and its authority and also demonstrate its authority and ability to initiate organizational change if required:
  - i. System documentation and system changes;
  - ii. Management review;
  - iii. Complaints;
  - iv. Evaluation of corrective actions;
  - v. Internal audit planning and evaluation of the results;
  - vi. Changes to aspects and associated impacts for environmental management systems and
  - vii. Different legal requirements.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

Audit Notes: The document "InternalReview-ISA-FIELD-CHECKLIST-ALL-SF-2018" documents the Internal Silvicultural Audit 2018 (Tuesday April 3 — Green Ridge State Forest; Wednesday April 4 — Potomac Garrett State Forest; Thursday April 5 — Savage River State Forest; and Thursday April 13 — Chesapeake Forest and Pocomoke State Forest. The report consists of 16 completed review checklists of "AWP Forest Harvest Proposals".

The "State Forest Managers Meeting on September 13, 2017 attended by the leadership team, central office staff, district foresters, and state forester managers included topics comprising the management review, including:

1. MDA forest pests update
2. Feed-A-Bee grants
3. Western Maryland state forests conifer component - Rob Feldt
4. AWP updated acres
5. HCVF redefined / re-evaluation
6. CAC - policy review; member representative categories review; member appointments, status, changes, and removals; un-appointed nonmember involvement
7. MFS Volunteer webpage (dropped)
8. SFI 1.1.1.d. - biodiversity at landscape scales
9. Project Review - SFM discretion
10. Sustainable Forest Management Plan updates
11. Interdisciplinary Team (IDT) procedural modifications
12. State Forest Annual Summary Report
13. Timber Sales Online review
14. Forest Certification
  - Review of certification standards & compliance
  - 2016-17 CARS/OBS/OFI Review
  - 2016 Obs / 2017 Minor CAR: ESA site level plans Western MD
    - Meetings with Natural Heritage Program
  - 2016 Obs / 2017 Minor CAR: Historic role of conifers WMD
    - Addendum to SFMPs
  - 2016 Obs: Funding for trails (closed)
  - 2017 Major CAR: Use of Trademarks (closed)
  - SFI annual reporting — deadline to SFI March 31
  - 2018 Auditor expectations
15. State Forest Metrics & Quarterly Reports
16. REMINDER: AWP approval procedures (no printed copy, just signature page)
17. Next audit – Week of April 23 — Western Maryland
18. State Forests Internal Silvicultural Audit — GR (4/3) PG (4/4) SR (4/5) ES (4/11)
19. Next SFM meeting date

(END Sub-Checklist 9-1-A: Eligibility Criteria Established in IAF-MD1)

### Sub-Checklist 9-1-B: Alternative Approaches to Sampling from Section 9, 5.2

**Applicable**     
  **Not Applicable, checklist deleted.**

(END Sub-Checklist 9-1-B: Alternative Approaches to Sampling from Section 9, Subsection 5.2)