



# Recertification Audit Report

2010-2014 Sustainable Forestry Initiative® Standard

May 31, 2014

**A. Name:** Maryland DNR Forest Service

**FRS #:** 0Y301

**B. Scope:**

*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-SFIS-0Y301.*

No Change    Changed

**C. NSF Audit Team:** SFI Lead Auditor: Norman Boatwright. FSC Lead Auditor: Kyle Meister and Joint Team Auditor: Anne Marie Kittredge

**D. Audit Dates:** April 7-11, 2014

**E. Reference Documentation:**

2010-2014 SFI Standard®

Maryland Forest Service SFI Documentation: various dates and versions

**F. Audit Results: Based on the results at this visit, the auditor concluded**

- Acceptable with no nonconformances; or
- Acceptable with minor nonconformances to be corrected before the next scheduled audit;
- Not acceptable with one or two major nonconformances - corrective action required;
- Several major nonconformances - the certification may be canceled without immediate action

**G. Changes to Operations or to the SFI Standard:**

Are there any significant changes in operations, procedures, specifications, FRS, etc. from the previous visit?    Yes    No   If yes, provide brief description of the changes:

**H. Other Issues Reviewed:**

- Yes    No   Public report from previous audit(s) is posted on SFB web site.
- Yes    No    N.A.   SFI and other relevant logos or labels are utilized correctly.
- Yes    No   The program is a Multi-site Organization:  
*Multi-Site Organization: A n 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.*

Source: SFI Requirements, Section 9, Appendix: Audits of Multi-Site Organizations

IAF-MD1 or  The alternate approach outlined in SFI Requirements, Section 9, Appendix 1 was assessed by NSF's Lead Auditor during the certification audit.

Yes  No Concerns/ issues are listed in the checklist (to be reviewed by NSF Forestry Program Manager)

### **I. Corrective Action Requests:**

Corrective Action Requests issued this visit (through NSF's on-line OASIS audit tool): None.

There are no previous non-conformances to address.

Corrective Action Plan is not required.

At the conclusion of this Surveillance Audit visit, no CARs were issued or remain open and three (3) Opportunities for Improvement were identified.

### **H. Future Audit Schedule:**

Follow-up or Surveillance Audits are required by the 2010-2014 Sustainable Forestry Initiative Standard ®. The next Surveillance Audit is scheduled for the week of April 6, 2015. The assigned lead auditor will contact you 2-3 months prior to this date to reconfirm and begin preparations. Recertification must be completed before May, 2017. ***For multi-site organizations*** the sampling plan requires audits of the central function and at least 2 of 5 forests each year.

### **Appendices:**

Appendix I: Surveillance Notification Letter and Audit Schedule

Appendix II: Public Surveillance Audit Report

Appendix III: Audit Matrix and Multi-Site Checklist

Appendix IV: Site Visits and List of Participants

Appendix V: SFI Reporting Form

**Appendix I**



**Surveillance Notification Letter  
and Audit Schedule**



April 3, 2014

**Re: Confirmation of SFI Recertification 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 FSC and SFI Recertification Audits of your state forest system the week of April 7<sup>th</sup>. This letter provides the SFI audit plan; the FSC audit plan is being developed by Kyle Miester, SCS Lead Auditor.

The SFI audit is a full review of your SFI Program to confirm that it continues to be in conformance with the SFI Standard and that continual improvement is being made. 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-SFIS-0Y301.

The audits will commence with an opening meeting on April 7<sup>th</sup> at 8 am at the Chesapeake Forest HQ in Snow Hill, MD and the closing meeting will occur on Friday April 11<sup>th</sup> at 11:00 am at the New Germany State Park lake house in Grantsville, MD.

We have previously discussed the preliminary itinerary for the audit and worked together to develop a detailed audit plan which is attached.

The field audits will be conducted by 3 auditors involving the combination of a single team and two field teams as indicated on the audit plan. Bios for each of the audit team member are also attached.

Please also provide any additional information regarding progress on issues associated with the three (3) Opportunities for improvement from the 2013 audit:

SFI Indicator 2.3.5 requires “Retention of vigorous trees during partial harvesting, consistent with scientific silvicultural standards for the area.”

**There is an opportunity to improve the implementation of sound silviculture.**

Field observations confirm that most partial harvests target low vigor trees for removal. The current goals and methods show a strong orientation towards implementation of sound

silviculture. SILVAH Oak is being implemented for all hardwood harvests in the western mountains. On one site visited some of the trees designated for removal were more vigorous and more desirable than adjacent trees not so designated. Partial harvests in the eastern forests continue to be superb.

SFI Indicator 2.3.7 requires “Road construction and skidding layout to minimize impacts to soil productivity and water quality.”

**There is an opportunity to improve the implementation of the road maintenance and reconstruction program.**

Administrative challenges have delayed the implementation of needed road repairs and upgrades. The Maryland Forest Service has assessed the road system and developed a prioritized list of road projects designed to ensure that the most problematic roads, in terms of potential and current water quality impacts, are addressed first. However challenges in obtaining permits through Maryland Department of the Environment (MDE) have caused delays and have led to a situation where necessary but lower priority ditch-relief culvert replacements and associated re-grading/re-surfacing projects are being done using recreational trail grants, but the more problematic crossings involving ephemeral or intermittent streams are not being done. The road and trail repair work done to date is superb but is not covering sufficient areas to catch up with the long-term backlog of road issues. Absent significant progress a Major Non-conformance is likely during the 2014 re-certification audit.

Skidding layouts and road issues within the control of the Maryland Forest Service are consistently done according to best practices, leading to conservation of soil and water consistent with the full suite of SFI requirements.

SFI Indicator 2.4.2 requires “Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.

**There is an opportunity to improve in the western region regarding forest health and the treatment of overstocked stands.**

East: Pine stands are kept healthy through a pro-active thinning program which is effectively maintaining proper stocking levels and allowing trees to grow vigorously.

West: Over the past few years foresters have focused on salvage of trees damaged by the 2002 ice storm and subsequent droughts, or by gypsy moth defoliation, and most recently the hail-storm of 2011. The longer-term silviculture program has been a lower priority, and some stands, particularly conifers, are significantly overstocked. Recently efforts to implement routine management have declined; harvest levels at Savage River State Forest in 2010 were about 1/8 of growth. The audit team observed many overstocked hardwood stands. While direct forest health impacts were not confirmed, the team notes that management plans emphasize maintaining proper stocking levels as the pest management strategy.

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 all components of your SFI program (Objectives 1-7, 16-20. Please assemble office evidence needed to confirm conformance to these requirements.
3. Verify effective implementation of any corrective action plans from the previous NSF audit;
4. Review logo and/or label use;
5. Confirm public availability of public 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 2014 audit will include all of these sites.

The enclosed tentative schedule outlines the topics I expect to review during this visit. The schedule can be adapted either in advance or on-site to accommodate any special circumstances. We should plan to have lunch on-site whenever possible to expedite the visit.

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

Best Regards,

*Norman Boatwright*

Norman Boatwright  
Lead Auditor, NSF-ISR, Ltd.  
Enclosure: Agenda for Surveillance Audit  
Auditor Bios

Maryland DNR Forest Service      Jack Perdue      410.310.6866      Kyle Miester      503-758-7768  
 Prepared :: 2014-04-03      Kip Powers      443-235-0985      Anne Marie      413-230-0465  
    Norman Boatwright      843-229-1851

## Sunday April 6

*Audit team stays at Sleep Inn, Salisbury MD – 6:00PM audit planning dinner (audit team only)*

## Monday April 7

*7 am :: Auditors meet Kip Powers at hotel and follow him to CF HQ*

*8 am :: Chesapeake Forest HQ, Snow Hill MD :: Audit begins*

- *Audit opening reports and remarks*
  - *Presentation of DNR audit reports*
- *Introductions to Eastern Shore state forests*
  - *Chesapeake Forest background*
  - *Parker Forestry – forest management contractual group*
  - *Forest Inventory Project*
- *Tour Chesapeake Forest and Pocomoke State Forest (Entire Audit Team)*
  - **STOP 1:** P02 – Nazareth Church – Tract 6, Stands 6 & 8 (pond pine restoration)
  - **STOP 2:** P02 – Nazareth Church – Tract 4, Stand 19 (FY2014 final harvest)
  - **STOP 3:** P02 – Nazareth Church – Tract 4, Stand 5; Tract 5, Stands 1 & 15 (pre-commercial thinning)
  - **LUNCH**
  - **STOP 4:** WR40 – Dunn Swamp Complex – Stands 17, 18, 25, 26 (first thinning) & Stand 15 (final harvest)
  - **STOP 5:** P07 – Chandler – Tract 22, Stand 4 (pre-commercial thinning)
  - **STOP 6:** P07 – Chandler – Tract 23, Stand 1 (FY2014 first thinning)
  - **STOP 7:** P06 – Hudson-Tarr Mountain Bike Trail (recreation)
- *Announce next day plans*

*Audit team stays at Sleep Inn, Salisbury MD*

## Tuesday April 8 *Audit team departs hotel at 7:30*

*8 am :: Chesapeake Forest HQ :: Eastern Shore audit continues (end at northern sites) (Audit Team Splits)*

AUDIT TEAM 1	
<b>STOP 1</b>	Parker Forestry Office
<b>STOP 2</b>	W35 – Messick Complex – Stand 8 (pre-commercial thinning)
<b>LUNCH</b>	
<b>STOP 3</b>	W17 – RF Richardson Complex – Stand 8 (pre-commercial thinning)
<b>STOP 4</b>	W17 – RF Richardson Complex – Stand 1 (final harvest)
<b>STOP 5</b>	W19 – McMichael Complex – Stand 7 (pre-commercial thinning)
<b>STOP 6</b>	D03 – Little Blackwater (invasive control)

AUDIT TEAM 2	
<b>STOP 1</b>	W08 – Bacon Complex – Stand 10 (first thinning)
<b>STOP 2</b>	Tom Tyler Trail (recreation)
<b>STOP 3</b>	D14 – Indiantown Complex – Stands 27, 28, 29 (first thinning) D14 – Indiantown Complex – Stands 5, 6, 7, 9, 10 (restoration project)
<b>LUNCH</b>	
<b>STOP 4</b>	D21 – Lecompte Complex – Stands 3 & 4 (first thinning)
<b>STOP 5</b>	D04 – Lindner Complex – Stands 8, 9, 11, 12 (first thinning)
<b>STOP 6</b>	D03 – Little Blackwater (invasive control)

4 pm :: *Tour of Chesapeake Forest and PSF ends (audit teams meet at last site)*

4 pm – 5 pm (1 hr) *Audit team travels to Annapolis MD*

*Audit team stays Annapolis MD*

## **Wednesday April 9**

7 am – 9 am (2 hrs) :: *audit team travels to Green Ridge State Forest*

9:30 am :: *Flintstone Fire Hall :: Western MD audit begins*

- *Introductions to Western MD state forests*
- *Shale Barren restoration presentation – with DNR Natural Heritage Program*
- *Tour Green Ridge State Forest*

12 noon :: *Lunch in the field (provided) (Audit team remains together)*

- *Tour Green Ridge State Forest*
- *Oldtown Rd harvest sites*
- *Malcolm Rd/Anthony's Ridge - TSI/Golden Wing Warbler habitat improvement*
- *Kirk Orchard Special Wildlife Habitat Area*
- *Announce next day plans*

2-3 pm *Audit team travels to Savage River State Forest*

- *St Johns Rock ORV trail*
- *Jacobs Rd harvest site*

*Audit team stays at Comfort Inn, Grantsville MD*

## **Thursday April 10** (Audit team has dinner together to begin scoring)

7:30 *Audit team departs hotel for New Germany State Park Lake House (Audit Team Splits, one tours Savage River State Forest and the other Potomac/ Garrett State Forests)*

8:00 *Arrive Lake House – agenda announcements, lunch pickups*

8:20 *Leave the Lake House*

### **Savage River State Forest Audit Tour**

9:00-10:25 *Russell Road – salvage harvest (completed)*

11:00-11:30 *Fairview Road Aspen Regeneration*

11:40-12:40 *Fairview Road salvage harvest*

12:50-1:20 *East Shale Road – forest road improvement projects*

1:35-2:35 *Posey Row Road – regeneration harvest*

3:00-3:45 *Margroff Place*

- *Regeneration harvest*
- *Thinning/Sanitation*

4:30 *Arrive Lake House*

## Potomac/Garrett State Forest Audit Tour

8:20-9:00 Travel to Potomac/ Garrett State Forest

### 9:00-10:00 Potomac/Garrett State Forest Office

- Introductions, Program discussions,
- GIS / Forest Inventory Program Review
- Non Native Invasive Species Control Project
- Forest Roads Inventory
- Staff Training

### 10:00-11:00 Compartment 17 D&G: 17-D

- Shelterwood system with an initial thinning/preparation cut completed to provide maximum growth opportunity to residual seed (acorn) producing trees. Includes herbicide applications prior to harvest as well as deer fencing contracted by timber operator. 17-G involves a 9 ac. clear-cut with variable retention.

(11:00 – 11:30 Travel)

### 11:30-11:50 Public education / outreach:

- Kindness Demonstration Forest
- Neighboring landowner relations

(11:50- 1200 Travel)

12:00- 12:45 **Lunch Break** – at Snaggy Mountain Group Campsite w/ comfort station.

### 12:45-1:30 Compartment 32 Brier Ridge:

- Site includes herbicide work that had been completed and viewed last year though shelterwood harvest had not begun, harvest is completed. Camping areas, ESA issues.

(1:30-1:40 Travel)

### 1:30-2:15 Compartment 34-3:

- Active harvest site; a clearcut with variable retention. Moderate deer impacts addressed in contracts 'special conditions'. ESA boundary adjusted per field delineation.

### 2:15-3:00 Compartment 35 I&J:

- Mixed oak (33-I) and Alleghany hardwoods (33-J) stands involving 2 & 3 stage shelterwood systems as well as fern and grass control (herbicide) work.

(3:00 -3:30 Travel)

### 3:30 – 4:15 Piney Mt. Red Spruce / ESA Management:

- Crop tree release in Native Red Spruce ESA, and tree planting within The Nature Conservancy Primary Buffer to Cranesville Swamp Natural Area.

**4:15** *Adjourn*

- *Announce next day plans*

*Audit team stays at Comfort Inn, Grantsville MD (Audit Team Dinner and Scoring)*

## **Friday April 11**

*8 am :: Auditors prepare reports*

*11am -12 pm :: New Germany State Park, Lakehouse :: Auditors present closing reports*

*12 pm – 3 pm (3 hrs) :: audit travels to BWI airport*

<b>Auditor Name:</b>	Kyle Meister	<b>Auditor role:</b>	Lead FSC auditor
<b>Qualifications:</b>	<p>Kyle Meister is a Certification Forester with Scientific Certification Systems. He has been with SCS since 2008 and has conducted FSC FM pre-assessments, evaluations, and surveillance audits in Brazil, Panama, Mexico, Costa Rica, Bolivia, Indonesia, India, Japan, New Zealand, Spain, and all major forest producing regions of the United States. He has conducted COC assessments in Oregon, Pennsylvania, and California. Mr. Meister has successfully completed CAR Lead Verifier, ISO 9001:2008 Lead Auditor, and SA8000 Social Systems Introduction and Basic Auditor Training Courses. He holds a B.S. in Natural Resource Ecology and Management and a B.A. in Spanish from the University of Michigan; and a Master of Forestry from the Yale School of Forestry and Environmental Studies.</p>		
<b>Auditor Name:</b>	Anne Marie Kittredge	<b>Auditor role:</b>	Forest ecologist/ assistant FSC/SFI auditor
<b>Qualifications:</b>	<p>Anne Marie Kittredge is a Forest Management Lead Auditor with experience conducting audits for large and small private and public landowners. Anne Marie also conducts Lead Auditor Chain of Custody audits under the SFI, FSC and PEFC Standards, is qualified as a Lead Auditor (ISO 19011) and has authored &gt;500 reports for a broad range of landowners, manufacturers, distributors and brokers. Anne Marie has &gt; 20 years of experience in traditional forest management, wildlife habitat management, marketing and utilization and forest cutting practices regulations. Anne Marie's experience as a state forester in Massachusetts focused on management of FSC certified state-owned forest lands, forest cutting practice regulation enforcement as well as private landowner assistance and current use certification administration. Anne Marie earned both MS and BS in Forestry from the University of Massachusetts in Amherst.</p>		
<b>Auditor Name:</b>	Norman Boatwright	<b>Auditor role:</b>	Lead SFI auditor
<b>Qualifications:</b>	<p>Norman Boatwright is the president of Boatwright Consulting Services, LLC located in Florence, South Carolina. BCS handles typical forestry consulting, SFI, ATF and FSC Audits, Phase I Environmental Site Assessments, Forest Soil Mapping, Wetland Delineation, and other Biological Services. Norman has over twenty-nine years' experience in intensive forest management, eighteen years' experience in environmental services and ten years' experience in forest certification auditing. He has conducted Phase I Assessments on over three hundred and fifty projects covering 3,000,000 acres, Endangered Species Assessments on timberland across the South, and managed soil mapping projects on over 1.3 million acres. From 1985-1991, he was Division Manager at Canal Forest Resources, Inc. and was responsible for all forest management activities on about 90,000 acres of timberland in eastern South Carolina. Duties included budgeting and implementing land and timber sales, site preparation, planting, best management practices, road construction, etc. From 1991-1999, he was manager of Canal Environmental Services which offered the following services: Phase I Environmental Site Assessments, Wetland Delineation and Permitting and Endangered Species Surveys. From 1999-2012 he was the Environmental Services Manager Milliken Forestry Company. Norman has extensive experience auditing SFI, procurement and land management organizations and American Tree Farm Group Certification Programs. He is also a Lead Auditor for Chain of Custody Audits under SFI, PEFC, and FSC.</p>		

## Appendix II



### Maryland DNR Forest Service 2014 SFI Summary Recertification Audit Report

The SFI Program of the Maryland DNR Forest Service of Annapolis, Maryland has achieved continuing conformance with the SFI Standard®, 2010-2014 Edition, according to the NSF-ISR SFIS Certification Audit Process.

The Maryland DNR Forest Service initially obtained SFI Certification from NSF-ISR on July 24, 2003 (NSF-ISR initially certified the Chesapeake Forest in 2003, with two significant scope expansions since) 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 within the expanded scope based on an audit of the six largest state forests against the SFI 2010-2014 Standard. Surveillance audits were conducted in 2012 and 2013 and this is the next scheduled Recertification Audit.

The state forests included in the current scope were certified to the SFIS on August 14, 2011. This report describes the second Recertification Audit designed to focus on changes in operations, the management review system, and efforts at continuous improvement. In addition, all SFI requirements were selected for detailed review.

#### Maryland's State Forests

Maryland DNR Forest Service is responsible for the management of the 204,533 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 Draft 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)'*

### **SFI 2010-2014 Standard Scope**

Scope Statement: 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-SFIS-0Y301.

The audit was performed by NSF-ISR on April 7-11, 2014 by an audit team headed by Norman Boatwright, Lead Auditor supported by Anne Marie Kittredge, Team Auditor. Audit team members fulfill the qualification criteria for conducting SFIS Certification Audits of "Section 9. SFI 2010-2014 Audit Procedures and Auditor Qualifications and Accreditation" contained in Requirements for the SFI 2010-2014 Program: Standards, Rules for Label Use, Procedures, and Guidance.

The scope of the SFIS Audit included land management requirements and general requirements; there are no milling or mill procurement operations. Land management and forestry practices that were the focus of field inspections included those that have been under active management over the planning period of the past year. Practices conducted earlier were also reviewed as appropriate (regeneration and BMP issues, for example). In addition, SFI obligations to promote sustainable forestry practices, to seek legal compliance, and to incorporate continual improvement systems were within the scope of the audit.

A Core Indicator and the SFI Objectives relating to procurement were outside of the scope of Maryland's SFI program and were excluded from the scope of the SFI Certification Audit as follows:

- Core Indicator 2.1.4: Minimized plantings of exotic tree species.
- Core Indicator 2.1.7: Afforestation programs that consider potential ecological impacts of the selection and planting of tree species in non-forested landscapes.

- Performance Measure 2.5: Program Participants that deploy improved planting stock, including varietal seedlings, shall use sound scientific methods.
- Objective 8. Landowner Outreach: To broaden the practice of sustainable forestry by forest landowners through fiber sourcing programs.
- Objective 9. Use of Qualified Resource and Qualified Logging Professionals: To broaden the practice of sustainable forestry by encouraging forest landowners to utilize the services of forest management and harvesting professionals.
- Objective 10. Adherence to Best Management Practices: To broaden the practice of sustainable forestry through the use of best management practices to protect water quality.
- Objective 11. Promote Conservation of Biological Diversity, Biodiversity Hotspots and High-Biodiversity Wilderness Areas: To broaden the practice of sustainable forestry by conserving biological diversity, biodiversity hotspots and high-biodiversity wilderness areas.
- Objective 12. Avoidance of Controversial Sources including Illegal Logging: To broaden the practice of sustainable forestry by avoidance of illegal logging.
- Objective 13. Avoidance of Controversial Sources including Fiber Sourced from Areas without Effective Social Laws: To broaden the practice of sustainable forestry by avoiding controversial sources.
- Core Indicator 15.1.2: Research on genetically engineered trees via forest tree biotechnology shall adhere to all applicable federal, state, and provincial regulations and international protocols.

### **SFIS Audit Process**

The objective of the audit was to assess continuing conformance of the firm's SFI Program to the requirements of the Sustainable Forestry Initiative® Standard, 2010-2014 Edition.

NSF-ISR initiated the SFIS 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 SFIS Certification Audit, and to prepare a detailed audit plan. NSF then conducted the SFIS Certification Audit of conformance to the SFI 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 2010-2014 Sustainable Forestry Initiative Standard ®. The next Surveillance Audit is scheduled for April 6, 2015.

The audit was governed by a detailed audit plan designed to enable the audit team to efficiently determine conformance with the applicable SFI 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-ISR reviewed a sample of the written documentation assembled to provide objective evidence of SFIS Conformance. NSF-ISR 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-ISR SFI-SOP. NSF-ISR also 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 possible findings of the audit included Full Conformance, Major Non-conformance, Minor Non-conformance, Opportunities for Improvement, and Practices that exceeded the Basic Requirements of the SFIS.

### **Overview of Audit Findings**

Maryland's SFI Program demonstrated conformance against all of the SFI. As such, the program has earned recertification. There are no new non-conformances, and three (3) new "Opportunities for Improvement". The program has continued to exceed the standard in several areas. Details are provided below.

No non-conformances were identified in the 2013 audit.

#### **Opportunities for Improvement**

Three (3) opportunities for improvement (OFIs) were identified in the 2014 audit:

SFI Indicator 2.3.7 requires "Road construction and skidding layout to minimize impacts to soil productivity and water quality".

#### **There is an opportunity to improve the implementation of the road maintenance and reconstruction program.**

Administrative challenges have delayed the implementation of needed road repairs and upgrades. The Maryland Forest Service has assessed the road system and developed a prioritized list of road projects designed to ensure that the most problematic roads, in terms of potential and current water quality impacts, are addressed first. However challenges in obtaining permits through Maryland Department of the Environment (MDE) have caused delays and have led to a situation where necessary but lower priority ditch-relief culvert replacements and associated re-grading/re-surfacing projects are being done using recreational trail grants, but the more problematic crossings involving ephemeral or intermittent streams are not being done. The road and trail repair work done to date is superb but is not covering sufficient areas to catch up with the long-term backlog of road issues.

Skidding layouts and road issues within the control of the Maryland Forest Service are consistently done according to best practices, leading to conservation of soil and water consistent with the full suite of SFI requirements".

SFI Indicator 2.4.2 requires “Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.

**There is an opportunity to improve the implementation of budgeted harvests relative to the treatment of overstocked stands.**

In reviewing the Silviculture Activity Summary for each state forest, it became evident that, over a twelve (12) year period, harvesting activities are well below planned levels. While direct forest health impacts were not confirmed, the team notes that management plans emphasize maintaining proper stocking levels as the pest management strategy.

SFI Indicator 20.1.1 requires “System to review commitments, programs and procedures to evaluate effectiveness”.

**There is an opportunity to improve the internal audit process.**

In reviewing the Annual Management Review which included discussion of third party audits and internal audits conducted on harvested areas, it became evident that the internal audit process, at the State Forest level, should also address the remaining applicable parts of the Standard.

\*\*\*\*\*

**Exceeds the Requirements of the SFI 2010-2014 Standard**

NSF-ISR also identified the following areas where forestry practices and operations exceed the basic requirements of the SFI Standard:

- The program exceeds the requirements to promote the conservation of native biological diversity.  
(Indicator 4.1.1 requires “Program to promote the conservation of native biological diversity, including species, wildlife habitats and ecological community types.”)
- The program exceeds the requirements to protect threatened and endangered species.  
(Indicator 4.1.2 “Program to protect threatened and endangered species.”)
- An exceptional range of high-quality recreational opportunities are provided on the Maryland State Forests.  
(Performance Measure 5.4 “Program Participants shall support and promote recreational opportunities for the public.”)
- The program for the identification and protection of special sites is exemplary.  
(Performance Measure 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.”).

\*\*\*\*\*

The next SFI Surveillance audit is scheduled for April 6, 2015.

### **General Description of Evidence of Conformity**

NSF's audit team used a variety of evidence to determine conformance. A general description of this evidence is provided below, organized by SFI Objective.

**Objective 1. Forest Management Planning** - To broaden the implementation of sustainable forestry by ensuring long-term forest productivity and yield based on the use of the best scientific information available.

**Summary of Evidence** – The forest management plans for each state forest and supporting documentation and the associated inventory data and growth models 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 Productivity** - To ensure long-term forest productivity, carbon storage and conservation of forest resources through prompt reforestation, soil conservation, afforestation and other measures.

**Summary of Evidence** – Field observations and associated records 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 water quality in streams, lakes and other water bodies.

**Summary of Evidence** – Field observations of a range of sites were the key evidence. Auditors visited the portions of many field sites that were closest to water resources.

**Objective 4. Conservation of Biological Diversity including Forests with Exceptional Conservation Value** 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 habitat diversity and the conservation of forest plants and animals, including aquatic species.

**Summary of Evidence** – 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 was supported by the extensive use of college-trained field biologists.

**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. Further 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 ecologically, 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.

**Objective 7. Efficient Use of Forest Resources -** To promote the efficient use of forest 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.

**Objectives 8 through 13 are not applicable.**

**Objective 14. Legal and Regulatory Compliance -**

Compliance with applicable federal, provincial, state and local laws and regulations.

**Summary of Evidence** – **Interviews and a review of information on the internet helped confirm conformance.** The program employs specialists to ensure that conservation laws are followed.

**Objective 15. Forestry Research, Science, and Technology -** To support forestry research, science, and technology, upon which sustainable forest management decisions are based.

**Summary of Evidence** – Discussions with stakeholders and support for research on state forest lands were the key evidence used.

**Objective 16. Training and Education -**To improve the implementation of sustainable forestry practices through appropriate training and education programs.

**Summary of Evidence** – Interviews, review of training records, and the records of the Maryland Master Logger Program were sufficient evidence for this objective.

**Objective 17. Community Involvement in the Practice of Sustainable Forestry -**

To broaden the practice of sustainable forestry by encouraging the public and forestry community to participate in the commitment to sustainable forestry, and publicly report progress.

**Summary of Evidence** – Interviews, publications and the DNR website were used to confirm conformance with these requirements.

**Objective 18: Public Land Management Responsibilities -**

To support and implement sustainable forest management on public lands.

**Summary of Evidence** – The audit team reviewed written and on-line documentation of the extensive public involvement processes.

**Objective 19. Communications and Public Reporting** - To broaden the practice of sustainable forestry by documenting progress and opportunities for improvement.

**Summary of Evidence** – Reports filed with SFI Inc. and the SFI Inc. website provided the key evidence.

**Objective 20. Management Review and Continual Improvement** - To promote continual improvement in the practice of sustainable forestry, and to monitor, measure, and report performance in achieving the commitment to sustainable forestry.

**Summary of Evidence** – Records of program reviews, agendas and notes from management review meetings, and interviews with personnel from all involved levels in the organization were assessed.

### **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 zones, and to conform with 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 forests and lands of special significance (ecologically, geologically or culturally important) in a manner that protects their integrity and 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. Avoidance of Controversial Sources including Illegal Logging in Offshore Fiber Sourcing**

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.

**9. Legal Compliance**

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

**10. Research**

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

**11. Training and Education**

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

**12. Public Involvement**

To broaden the practice of sustainable forestry on public lands through community involvement.

**13. Transparency**

To broaden the understanding of forest certification to the SFI 2010-2014 Standard by documenting certification audits and making the findings publicly available.

**14. Continual Improvement**

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

*Source: Sustainable Forestry Initiative® (SFI) Standard, 2010-2014 Edition*

**For Additional Information Contact:**

Norman Boatwright  
Forestry Program Manager, NSF-ISR  
P.O. Box 4021  
Florence, South Carolina  
843.229.1851  
[nboatwright12@gmail.com](mailto:nboatwright12@gmail.com)

**Appendix III**



**Audit Matrix**

# Maryland DNR 2014 State Forests Recertification Audit

## NSF-ISR SFI 2010-2014 MATRIX

### Findings and Instructions:

<b>C</b>	Conformance
<b>Exr</b>	Exceeds the Requirements
<b>Maj</b>	Major Non-conformance
<b>Min</b>	Minor Non-conformance
<b>OFI</b>	Opportunity for Improvement (can also be in Conformance)
<b>NA</b>	Not Applicable
<b>Likely Gap *</b>	Likely Gap Against 2010-2014 SFIS (used for scoping or baseline audits)*
<b>Likely Conf. *</b>	Likely Conformance With 2010-2014 SFIS (used for scoping or baseline audits)*
<b>Auditor</b>	Optional; may be used for audit planning.
12, 13	Date Codes, for example: 12= July 2012; 13=Aug. 2013
Other	Words in <i>italics</i> are defined in the standard.

Yes  No  N.A. NSF mark (logo) is being used correctly.

Audit Notes:

**Objective 1. Forest Management Planning**

To broaden the implementation of *sustainable forestry* by ensuring *long-term forest productivity* and yield based on the use of the *best scientific information* available.

	2010-2014 Requirement	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
1.1	<b>Program Participants shall ensure that forest management plans include long-term harvest levels that are sustainable and consistent with appropriate growth-and-yield models.</b>	NB	14						
Notes	<p>Management plans reviewed include long-term harvest levels that appear sustainable and are based on appropriate growth and yield models. Harvest levels have been considerably lower than growth. The Chesapeake and Pocomoke SFs use Woodstock which links to a linear program solver to derive a “best fit” solution for the desired objectives. In these runs, the model uses LPABO, a freely available LP solver that appears to be adequate for this size model. The model is optimized to seek the maximum timber return to the landowner.</p> <p>Savage River and Potomac/Garrett SFs use the 2000 CFI annual growth rate data to determine the annual allowable cut.</p> <p>The Green Ridge SF uses area regulation to determine the annual allowable cut.</p> <p>The Woodstock model is also on all of the western SFs as a check to ensure the annual allowable cuts are reasonable.</p>								

	2010-2014 Requirement (Performance Measures bold)	Audit or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
1.1.1	<b>Forest management planning at a level appropriate to the size and scale of the operation, including:</b> <ol style="list-style-type: none"> <li>a. a long-term resources analysis;</li> <li>b. a periodic or ongoing forest inventory;</li> <li>c. a land classification system;</li> <li>d. soils inventory and maps, where available;</li> <li>e. access to growth-and-yield modeling capabilities;</li> <li>f. up-to-date maps or a geographic information system;</li> <li>g. recommended sustainable harvest levels for areas available for harvest; and h. 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).</li> </ol>	NB	14						

<b>Notes</b>	<p>Each state forest has a long term forest management plan. Reviewed updates to the management plans for the two forests in the eastern region: Chesapeake SF - July 1, 2007 Revision #75, November 4, 2013; Pocomoke SF October 24, 2013.</p> <p>The Maryland DNR Forest Service has completed the management plans for the forests in the western region:</p> <ul style="list-style-type: none"> <li>• Green Ridge SF – April 15, 2013</li> <li>• Potomac-Garrett SF - February 14, 2012</li> <li>• Savage River SF – February 29, 2012</li> </ul> <p>Items a through h are found in one or more of the following:</p> <ul style="list-style-type: none"> <li>• State Forest Management Plans</li> <li>• Annual Work Plans for each forest describe projects to be completed over the next 12 months.</li> </ul> <p>The GIS contains layers with soils, topography, stands, wetlands, and other features.</p>								
1.1.2	Documentation of annual harvest trends in relation to the sustainable forest management plan in a manner appropriate to document past and future activities.	NB	14						
<b>Notes</b>	<p>Descriptions of annual harvest trends in relation to the sustainable forest management plan are provided in the Annual Work Plans. The Maryland DNR Forest Service maintains a very accurate database of planned and completed activities. Confirmed “Silvicultural Activity Summary By Annual Work Plan 043012” covering the Chesapeake Forest. Timber Operation Order Operation Order 2011-601 requires for each forest an “End of Fiscal Year Summary” including: “... (a) (a) Proposed timber sale status, (b) Area description, (c) Silvicultural description, (d) Acres harvested, (e) Board foot volume harvested, (f) Amount of bid, and (g) Top bidder for each sale.”</p> <p>East: Annual Work Plans are model of clarity, providing superb transparency of actions for the public’s benefit. An activity summary by Annual Work Plan is available on-line. It clearly shows the actual accomplishments each year (2001-2011) compared to the recommended treatments contained in the “annual work plans”. The on-line report was updated following the 2012 audit.</p> <p>West: Savage River State Forest and Green Ridge State Forest plans contain a chart showing actual harvests and growth levels. Potomac Garrett State Forest plan does not show growth vs. harvest.</p>								
	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
1.1.3	A forest inventory system and a method to calculate growth and yield.	NB	14						
<b>Notes</b>	The use of SILVAH for forest inventory and to assess all stands in the western forests with sufficient precision to develop state-of-the-art prescriptions that integrate science-based methods to deal with significant regeneration challenges involving deer and invasive plants is an exemplary practice.								
	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>

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 (e.g. improved data, long-term drought, fertilization, climate change, forest land ownership changes, etc.).	NB	14						
<i>Notes</i>	See Indicator 1.1.3 above								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
1.1.5	Documentation of forest practices (e.g., planting, fertilization, and thinning) consistent with assumptions in harvest plans.	NB	14						
<i>Notes</i>	The Maryland DNR Forest Service maintains a very accurate database of planned and completed activities. Annual Work Plans, available online, provide a detailed description of forest practices approved. These AWP's are model of clarity, providing superb transparency of actions for the public's benefit. Forest practices accomplished are documented in the records but are not listed in the AWP's. The Maryland DNR Forest Service maintains a very accurate database of planned and completed activities. Delays in completing some proposed treatments do not appear to be inconsistent with harvest plan assumptions.								

## Objective 2. Forest Productivity.

To ensure *long-term* forest *productivity*, carbon storage, and *conservation* of forest resources through prompt *reforestation*, soil *conservation*, *afforestation* and other measures.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1	<b>Program Participants shall promptly reforest after final harvest.</b>	NB	14						
<i>Notes</i>	Prompt reforestation is specified in management plans and in AWP's. Foresters plan all treatments and consider regeneration during this planning. Regeneration surveys are conducted pre-harvest (for shelterwood prescriptions) and post-harvest as needed, either at the five-year point tied to harvests or as part of the program's continuous forest inventory (CFI). Prompt regeneration appears to be the norm, based on field observations.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.1	Designation of all harvest areas for either natural regeneration or by planting.	NB	14						

<i>Notes</i>	East: this designation is found in the AWP; recently most regeneration is natural. West: planting is rarely done.								
--------------	---	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.2	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.	NB	14						
<i>Notes</i>	No regeneration delays were observed.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.3	Clear criteria to judge adequate regeneration and appropriate actions to correct understocked areas and achieve acceptable species composition and stocking rates for both planting and natural regeneration.	NB	14						
<i>Notes</i>	The criteria for judging adequate stocking are: East: MFS Policy & Procedure Manual, Appendix K.; West: Regeneration adequacy is assessed per Silvah Protocols.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.4	Minimized plantings of exotic tree species, and research documentation that exotic tree species, planted operationally, pose minimal risk.	NA							
<i>Notes</i>	No exotic tree species are planted.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.5	Protection of desirable or planned advanced natural regeneration during harvest.	NB	14						

<i>Notes</i>	Field observations confirm that advanced natural regeneration is protected during harvest.								
--------------	--	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.6	Planting programs that consider potential ecological impacts of a different species or species mix from that which was harvested.	NB	14						
<i>Notes</i>	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.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.1.7	Afforestation programs that consider potential ecological impacts of the selection and planting of tree species in non-forested landscapes.	NA							
<i>Notes</i>	No afforestation is being conducted. All planting is reviewed by ID Team including WHS.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2.1	Minimized chemical use required to achieve management objectives.	NB	14						

<b>Notes</b>	Forest herbicide chemicals are mainly used to control invasive species and for hardwood control in pine stands on the Eastern Shore. A Pesticide Application process is completed for each invasive control application.								
--------------	--	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2.2	Use of least-toxic and narrowest-spectrum pesticides necessary to achieve management objectives.	NB	14						

<b>Notes</b>	Review of chemicals used to control hardwood on the Eastern Shore Mason Tract indicates 12 oz of Arsenal and 4 oz Oust Extra/acre were used. These are commonly use forestry herbicides applied at reasonable rates. Pesticide use covered in SFMP, review outlined in Timber Operation Order and annual work plan review process.								
--------------	---	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2.3	Use of pesticides registered for the intended use and applied in accordance with label requirements.	NB	14						

<b>Notes</b>	Confirmed through interviews and review of documents.								
--------------	---	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2.4	Use of integrated pest management where feasible.	NB	14						

<b>Notes</b>	Chemical treatments are based on site-specific prescriptions. Chemical treatments are only applied when alternatives are not feasible. They are not routinely applied, with a systems approach evident (consider alternatives and in context of the complete program of management).								
--------------	--	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2.5	Supervision of forest chemical applications by state- or provincial-trained or certified applicators.	NB	14						

<b>Notes</b>	Each Forest Manager is a licensed pesticide applicator with several employees trained and working under his license.								
--------------	--	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.2.6	Use of management practices appropriate to the situation, for example: <ul style="list-style-type: none"> <li>a. notification of adjoining landowners or nearby residents concerning applications and chemicals used;</li> <li>b. appropriate multilingual signs or oral warnings;</li> <li>c. control of public road access during and immediately after applications;</li> <li>d. designation of streamside and other needed buffer strips;</li> <li>e. use of positive shutoff and minimal-drift spray valves;</li> <li>f. aerial application of forest chemicals parallel to buffer zones to minimize drift;</li> <li>g. monitoring of water quality or safeguards to ensure proper equipment use and protection of streams, lakes and other water bodies;</li> <li>h. appropriate storage of chemicals;</li> <li>i. filing of required state or provincial reports; and/or</li> <li>j. use of methods to ensure protection of threatened and endangered species.</li> </ul>	NB	14						
<i>Notes</i>	Interviews confirmed.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3	<b>Program Participants shall implement forest management practices to protect and maintain forest and soil productivity.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.1	Use of soils maps where available.	NB	14						

<b>Notes</b>	Maps showing soils are used in sale design and planning, as evidenced by maps associated with treatment documentation reviewed during the audit.								
--------------	--	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.2	Process to identify soils vulnerable to compaction, and use of appropriate methods to avoid excessive soil disturbance.	NB	14						
<b>Notes</b>	Conformance was clear; managers go to great lengths to identify sensitive areas and avoid disturbing them. Foresters have been vigorously enforcing the rutting policy and using avoidance and mitigation to ensure very little rutting.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.3	Use of erosion control measures to <i>minimize</i> the loss of soil and site productivity.	NB	14						
<b>Notes</b>	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. No erosion issues were observed during the 2014 field audits.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.4	Post-harvest conditions conducive to maintaining site productivity (e.g. limited rutting, retained down woody debris, minimized skid trails).	NB	14						
<b>Notes</b>	Post-harvest conditions on all current harvest sites observed in 2014 were conducive to maintaining site productivity, with limited rutting, retained down woody debris, and minimized skid trails as appropriate.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.5	Retention of vigorous trees during partial harvesting, consistent with scientific silvicultural standards for the area.	NB	14						

<i>Notes</i>	On-site visits to thinned pine stands on the eastern forests indicate vigorous trees are retained. Auditor did note excessive “skinning” of the residual pond pine on P02 – Tract 6, stands 6 and 8.  No issues were identified by the on-site visits on the western forests.
--------------	---

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.6	Criteria that address harvesting and site preparation to protect soil productivity.	NB	14						
<i>Notes</i>	The SFMP and MFS Policy Procedure Manual contain clear criteria, including rutting guidelines.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.3.7	Road construction and skidding layout to minimize impacts to soil productivity and water quality.	NB					14		
<i>Notes</i>	<p><b>OFI: There is an opportunity to improve the implementation of the road maintenance and reconstruction program.</b></p> <p>This is a hold-over from the 2013 audit.</p> <p>Administrative challenges have delayed the implementation of needed road repairs and upgrades. The Maryland Forest Service has assessed the road system and developed a prioritized list of road projects designed to ensure that the most problematic roads, in terms of potential and current water quality impacts, are addressed first. However challenges in obtaining permits through MDE have caused delays and have led to a situation where necessary but lower priority ditch-relief culvert replacements and associated re-grading/re-surfacing projects are being done using recreational trail grants, but the more problematic crossings involving ephemeral or intermittent streams are not being done. The road and trail repair work done to date is superb but is not covering sufficient areas to catch up with the long-term backlog of road issues. Absent significant progress a Major Non-conformance is likely during the 2014 re-certification audit.</p> <p>Skidding layouts and road issues within the control of the Maryland Forest Service are consistently done according to best practices, leading to conservation of soil and water consistent with the full suite of SFI requirements.</p>								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.4	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.4.1	Program to protect forests from damaging agents.	NB	14						
<i>Notes</i>	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. Foresters in the east continue to be in response mode, and do a good job of addressing standing impacted by storms.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.4.2	Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.	NB					14		
<i>Notes</i>	<b>OFI: There is an opportunity to improve the implementation of budgeted harvests relative to the treatment of overstocked stands.</b> In reviewing the Silviculture Activity Summary for each state forest, it became evident that, over a twelve (12) year period, harvesting activities are well below planned levels. While direct forest health impacts were not confirmed, the team notes that management plans emphasize maintaining proper stocking levels as the pest management strategy.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.4.3	Participation in, and support of, fire and pest prevention and control programs.	NB	14						

<i>Notes</i>	Maryland Forest Service is the lead forest agency; many state forest workers are trained as wild fire fighters.								
--------------	---	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.5	<b>Program Participants that deploy improved planting stock, including varietal seedlings, shall use sound scientific methods.</b>	NA							
<i>Notes</i>									

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
2.5.1	Program for appropriate research, testing, evaluation and deployment of improved planting stock, including varietal seedlings.	NA							

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

To protect water quality in rivers, streams, lakes, and other water bodies.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.1	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>

3.1.1	Program to implement state or provincial best management practices during all phases of management activities.	NB	14						
<i>Notes</i>	BMP implementation is required and described in the SFMPs.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.1.2	Contract provisions that specify conformance to best management practices.	NB	14						
<i>Notes</i>	Acronym “BMP” not found in contracts, instead “Erosion and Sedimentation Control Plan” was referenced in timber sale/harvesting contracts in all forests audited, and this links to the BMPs. BMP inspectors are on the ID Teams.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.1.3	Plans that address wet-weather events (e.g. forest inventory systems, wet-weather tracts, definitions of acceptable operating conditions).	NB	14						
<i>Notes</i>	Field foresters, supervisors, consultants, and loggers are all aware of the need to avoid logging when soils are water-saturated and vulnerable to excessive compaction or rutting. Sites reviewed had low levels of soil impacts.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.1.4	Monitoring of overall best management practices implementation.	NB	14						
<i>Notes</i>	Tract Inspection Forms are used to document BMP inspections conducted during and at the completion of timber harvests.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.2	<b>Program Participants shall have or develop, implement and document riparian protection measures based on soil type, terrain, vegetation, ecological function, harvesting system and other applicable factors.</b>	NB	14						

<i>Notes</i>	See indicators below.
--------------	-----------------------

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.2.1	Program addressing management and protection of rivers, streams, lakes, and other water bodies and riparian zones.	NB	14						
<i>Notes</i>	Protection of rivers, streams, lakes, and other water bodies and riparian zones is at the heart of the management program as expressed in the state forest management plans, policies, and programs. Trained foresters plan all vegetation treatments, and foresters supported by specialists plan infrastructure-related projects. These projects are then reviewed by experienced managers and by specialists as part of the ID Team and normal administrative processes. A strong program has been demonstrated.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.2.2	Mapping of rivers, streams, lakes, and other water bodies as specified in state or provincial best management practices and, where appropriate, identification on the ground.	NB	14						
<i>Notes</i>	Rivers, streams, lakes, and other water bodies as specified in state or provincial best management practices are mapped and are marked in the field (using paint or flagging) prior to conducting harvesting or other management practices.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.2.3	Implementation of plans to manage or protect rivers, streams, lakes, and other water bodies.	NB	14						
<i>Notes</i>	Confirmed by field observations.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
3.2.4	Identification and protection of non-forested wetlands, including bogs, fens and marshes, and vernal pools of ecological significance.	NB	14						

<b>Notes</b>	<p>East: During harvest planning, and when found during harvests, foresters identify potential vernal pools and then refer them to experts to determine whether they are functional or legally significant. Once they are classified they are protected by applying appropriate buffers.</p> <p>West: Site visits confirmed that vernal pools and other water bodies are not included in the timber sale area.</p>
--------------	--

	<b>2010-2014 Requirement</b>	Audit -or	<b><u>C</u></b>	<b><u>EXR</u></b>	<b><u>Maj</u></b>	<b><u>Min</u></b>	<b><u>OFI</u></b>	<b><u>Likely Gap *</u></b>	<b><u>Likely Conf. *</u></b>
3.2.5	Where regulations or best management practices do not currently exist to protect riparian areas, use of experts to identify appropriate protection measures.	NB	14						
<b>Notes</b>	Note that BMPs do not cover maintenance of permanent forest roads. Road work is planned and overseen by experts.								

**Objective 4. Conservation of Biological Diversity including Forests with Exceptional Conservation Value.**

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 conservation of forest plants and animals, including aquatic species.

	<b>2010-2014 Requirement</b>	Audit -or	<b><u>C</u></b>	<b><u>EXR</u></b>	<b><u>Maj</u></b>	<b><u>Min</u></b>	<b><u>OFI</u></b>	<b><u>Likely Gap *</u></b>	<b><u>Likely Conf. *</u></b>
4.1	<b>Program Participants shall have programs to promote biological diversity <u>at stand- and landscape-levels</u>.</b>	NB AMK	14						
<b>Notes</b>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<b><u>C</u></b>	<b><u>EXR</u></b>	<b><u>Maj</u></b>	<b><u>Min</u></b>	<b><u>OFI</u></b>	<b><u>Likely Gap *</u></b>	<b><u>Likely Conf. *</u></b>
4.1.1	Program to promote the conservation of native biological diversity, including species, wildlife habitats and <u>ecological</u> community types.	NB AMK		14					

<b>Notes</b>	<p><b>The MD DNR program exceeds the requirements for promoting conservation of native biological diversity.</b></p> <p>Each of the 5 State Forests is managed under a program that is designed to protect and enhance biodiversity as described in each 10-year management plan. The conservation of biological diversity is explicitly stated as the goal management operations.</p> <p>This unique 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. Based on the results of interviews with participants, it is clear that the working relationships between ID team members remain effective and continue to improve on each of the 4 State Forests. Projects that are designed and implemented to conserve and enhance native biological diversity were observed at each of the 5 state forests during this 2014 audit program including for example Delmarva Fox Squirrel habitat and Delmarva Bay restoration (PSF &amp; CSF); golden-winged warbler habitat (GRSF); Margroff Place habitat project for early-successional species (SRSF); and Cranesville Swamp Natural Area (PGSF).</p>
--------------	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.2	Program to protect threatened and endangered species.	NB AMK		14					

<b>Notes</b>	<p><b>The MD DNR program exceeds the requirements for the protection of threatened and endangered species.</b></p> <p>Rare, threatened and endangered species are recorded in the heritage database. Heritage biologists are involved in planning, review and approval for each management prescription. Monitoring efforts follow each management activity that could affect RTE species or their habitats including monitoring of the effects of restoration treatments. Based on new research, the collection of American ginseng (<i>Panax quinquefolius</i>) from all MD DNR land was recently prohibited in an attempt to protect this species. RTE species conservation and enhancement projects were observed during this 2014 audit program including for example focus on Delmarva Fox Squirrel habitat and Delmarva Bay restoration (PSF &amp; CSF); golden-winged warbler habitat (GRSF); Margroff Place habitat project for early-successional species (SRSF); and Cranesville Swamp Natural Area (PGSF).</p>
--------------	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.3	Program to locate and protect known sites associated with viable occurrences of critically imperiled and imperiled species and communities <u>also known as Forests with Exceptional Conservation Value</u> . 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.	NB AMK	14						

<b>Notes</b>	<p>FECVs are generally covered within the broader HCVF approach. For example Delmarva Fox Squirrels are favored in the eastern forest by protection measures that have been built into HCVF zones based on the habitat requirements of this species. The western forests do not contain G1 or G2 species.</p>
--------------	---

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.4	Development and implementation of criteria, as guided by regionally appropriate <u>best scientific information</u> , to retain stand-level wildlife habitat elements such as snags, <u>stumps</u> , mast trees, down woody debris, den trees and nest trees.	NB AMK	14						
<b>Notes</b>	As confirmed during observation of thinning operations and clear-cuts in the eastern forests and within retention in salvage harvests and variable retention harvests in western Maryland, retention is consistent with the MD DNR policy. Field staff layout patterns of retention including both individual trees and islands/groups of retained trees; results include dispersed and clumped green tree retention, a variety of species and size classes and the protection of snags and den trees.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.5	Program for assessment, conducted either individually or collaboratively, of forest cover types, <u>age or size classes</u> , and habitats at the individual ownership level and, where credible data are available, across the landscape, <u>and take into account findings in planning and management activities</u> .	NB AMK	14						
<b>Notes</b>	Maryland DNR designed and implemented a process for each prescription to include review and approval by the ID teams, Advisory Committees and other Maryland Forest Service personnel who primarily work on private forest lands. The coordination with staff who work primarily on private lands effectively promotes an understanding of state forest land resources within a matrix of private land resources. For example, old growth forests are largely found on state lands rather than private lands, Wild lands-a designation that is solely found on state lands. Within the eastern region the working relationship with TNC ensures landscape scale consideration and the opportunity for cooperative management practices that cross property ownership lines. Progress continues to be made using the “LANDFIRE” program to develop a reliable database that provides estimates of the vegetation types across this ownership and other state lands in the eastern and western regions; this process is used to identify gaps in the network of protected vegetation types (“Representative Sample Areas” under FSC terminology).								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.6	Support of and participation in plans or programs for the conservation of old-growth forests in the region of ownership.	NB AMK	14						
<b>Notes</b>	Old Growth Ecosystem Management Areas (OGEMAs) and Potential Old Growth Management Area (POGMA) designations are extensive for the western forests. As a result of intensive settlement and previous management/land use practices under former ownership in the eastern forest Old-growth forests and older forest communities are not common however other management protection zones are used in the eastern forests that are reserved from silvicultural management and will over time supplement this designations.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.7	Participation in programs and demonstration of activities as appropriate to limit the introduction, impact and spread of invasive exotic plants and animals that directly threaten or are likely to threaten native plant and animal communities.	NB AMK	14						
<i>Notes</i>	As confirmed through interviews with Anne Hairston-Strang and other personnel, MD DNR completed an inventory of non-native invasive plants. MD DNR reviewed impacts of the presence of non-native invasive plants. In both the eastern and western Maryland State forests records document the continued and effective mechanical and chemical strategies that have been implemented to control these populations. Most pesticide application projects that were implemented during this audit cycle are for control of non-native invasive plants.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.1.8	Program to incorporate the role of prescribed or natural fire where appropriate.	NB AMK	14						
<i>Notes</i>	MD DNR Prescribed Fire Op Orders, interviews, observations and other documentation confirm that this program for the use of fire is effective; most specialists and managers would like to use the tool even more frequently. For example: during a presentation by Ed Thompson (Natural Heritage), the positive results of the use of prescribed fire on herbaceous species within a Shale Barren community were described. In another example, as observed during the 2014 audit at D14 within Indiantown Complex (CSF), the summer 2013 project restores a Delmarva Bay natural community's vegetation structure and hydrology through cooperative planning with Heritage staff, vegetation management by Heritage staff and contract operators, the use of prescribed fire by trained agency personnel and future efforts to restore original hydrology.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.2	<b>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.</b>	NB AMK	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>

4.2.1	Collection of information on <u>Forests with Exceptional Conservation Value</u> 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.	NB AMK	14						
<b>Notes</b>	<p>MD DNR's Natural Heritage Program maintains a database of RT&amp;E species. Foresters and specialists try to locate special sites and provide information to the Maryland Natural Heritage Program.</p> <p>Managers and Natural Heritage staff cooperate through attendance on the ID team and as a result sites have been identified and mapped and are managed for a variety of exceptional values. Most sites are included in the HCVF or ESA data layers. For example, the Green Ridge State Forest management plan includes prescriptions for management activities within these mapped critical habitats for state listed or uncommon species, shale barrens communities, old growth and potential old growth, vernal pools and unique open habitats. Similarly, the Potomac Garrett State Forest management plan describes more than 30 ecologically significant areas and other state protected lands, measures to protect the areas as well as restrictions to management including for example restricted use of pesticides in some areas. Land management staff provides time and expertise when prescribed fire or non-native invasive plant control is required to maintain or enhance an uncommon community type.</p>								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
4.2.2	A methodology to incorporate research results and field applications of biodiversity and ecosystem research into forest management decisions.	NB AMK	14						
<b>Notes</b>	<p>ID team members participate in the audit program and through interviews confirm that a strong emphasis on biodiversity protection exists in the context of active forest management. Botanists and ecologists review each proposed harvest and provide comments on those projects that may impact biodiversity or RTE species and natural communities. The relationship between Heritage staff and field managers continues to grow as confirmed through a variety of interviews and observations of staff interactions during this 2014 audit program.</p> <p>Maryland DNR's Policy &amp; Procedure Manual and each of the 5 management plans refer to the process of extensive review by the ID team for each proposed project. These ID teams represent the primary method for ensuring that current scientific knowledge is incorporated into treatments.</p> <p>Timber Operation Order Operation Order 2011-601 describes the composition of the ID team:</p> <p>(i) Unit Director or designee responsible for the lands involved  (ii) Land Unit Manager (iii) Fisheries (iv) Heritage (v) Wildlife (vi) Parks (vii) Land Acquisition and Planning  (viii) Environmental Specialist (ix) Maryland Department of the Environment (invited) (x) Natural Resources Police (invited)  (xi) Maryland Historical Trust (invited)</p> <p>Specialists involved in the 2014 audit program include several forest ecologists, botanists, fisheries biologists. Each demonstrated command of the scientific knowledge required to protect and manage biodiversity.</p>								

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

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

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.1	<b>Program Participants shall manage the impact of harvesting on visual quality.</b>	NB	14						
<i>Notes</i>	Policy and procedures manual has a section on aesthetics. See indicators.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.1.1	Program to address visual quality management.	NB	14						
<i>Notes</i>	<p>Planning for all harvests includes consideration of aesthetics; foresters are responsible, supported by ID Teams. Variable retention technique considers aesthetics when deciding on location of clumped retention. Confirmed: MFS Policy &amp; Procedure Manual section on “Visual Quality: “In laying out forest harvest and thinning operations, particular care will be given to the need for visual quality protection. This will include location and operations of landings, decks, roads, and other areas of concentrated activity. Visual buffers will be maintained along areas where required. All forest harvest plans are mapped on aerial photograph backgrounds. The responsible licensed forester decides the need for visual buffers and their extent is illustrated on the harvest plan maps included in the permit applications. ‘Forestry Aesthetics Guide: Image and Opportunity’ is the basic reference publication used by CFL &amp; Pocomoke State Forest staff. It is available to all field foresters for guidance.</p> <p>Site visits did not identify any visual quality concerns.</p>								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.1.2	Incorporation of aesthetic considerations in harvesting, road, landing design and management, and other management activities where visual impacts are a concern.	NB	14						
<i>Notes</i>	Confirmed by field observations.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
--	------------------------------	--------------	----------	------------	------------	------------	------------	-------------------------	---------------------------

5.2	<b>Program Participants shall manage the size, shape and placement of clearcut harvests.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.2.1	Average size of clearcut harvest areas does not exceed 120 acres (50 hectares), except when necessary to meet regulatory requirements or to respond to forest health emergencies or other natural catastrophes.	NB	14						
<i>Notes</i>	Confirmed by review of data that the average clearcut has not exceeded 120 acres at least during the past 3 years.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.2.2	Documentation through internal records of clearcut size and the process for calculating average size.	NB	14						
<i>Notes</i>	GIS and timber harvest records are superb.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.3	<b>Program Participants shall adopt a green-up requirement or alternative methods that provide for visual quality.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.3.1	Program implementing the green-up requirement or alternative methods.	NB	14						
<i>Notes</i>	Field observations confirmed that adjacency and green-up requirements are met. GIS and planning system ensures that adjacent stands are not harvested. Good regeneration program exists.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.3.2	Harvest area tracking system to demonstrate conformance with the green-up requirement or alternative methods.	NB	14						
<i>Notes</i>	GIS tracks planned and completed harvests. Maps provided for each harvest (planned, on-going, completed) show good systems.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
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.	NB	14						
<i>Notes</i>	Confirmed by site visits.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.4	<b>Program Participants shall support and promote recreational opportunities for the public.</b>	NB		14					
<i>Notes</i>	<b>The MD DNR program exceeds the requirements for providing an exceptional range of high-quality recreational opportunities State Forests.</b>								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
5.4.1	Provide recreational opportunities for the public, where consistent with forest management objectives.	NB		14					
<i>Notes</i>	Extensive recreation programs including hunt club leases on half of the CSF and public hunting opportunities on all remaining lands, various recreational trails, campgrounds, boat launching areas, and other.								

**Objective 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.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
6.1	<b>Program Participants shall identify special sites and manage them in a manner appropriate for their unique features.</b>	NB AMK	14						
<i>Notes</i>	The designation of High Conservation Value Forest (HCVF) is the primary method used for protecting and enhancing special sites. HCVF areas include for example Ecologically Significant Areas, old growth and wetlands of special state concern. A significant proportion of each state forest has been designated as HCVF including Potomac Garrett State Forest (44%); SRSF (32%); Green Ridge State Forest (39%); PSF (100%) and CSF (100%).								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
6.1.1	Use of information such as existing natural heritage data, expert advice or <u>stakeholder consultation</u> in identifying or selecting special sites for protection.	NB AMK		14					
<i>Notes</i>	<p><b>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.</b></p> <p>As confirmed through interviews, MD DNR Heritage data is collected by Heritage biologists as well as by non-agency specialists. Based on data and advice, field staff identify and select special areas including for example representative sample areas for protection and for management and/or restoration. Management and restoration projects are planned, presented, reviewed and approved through annual work plans by the ID team which includes stakeholders and experts. Management plans and annual work plans are presented for review and comment to both experts and stakeholders. For example, Green Ridge State Forest management plan prescriptions include state listed or uncommon species, shale barrens communities, old growth and potential old growth, vernal pools and unique open habitats based on cooperation and advice from Natural Heritage. Potomac Garrett State Forest management plan prescriptions describes more than 30 ecologically significant areas based on data from Natural Heritage. As observed during the 2014 audit at D14 within Indiantown Complex (CSF), the summer 2013 project restores a Delmarva Bay natural community’s vegetation structure and hydrology through cooperative planning with Heritage staff, vegetation management by Heritage staff and contract operators and the use of prescribed fire by trained agency personnel.</p>								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
6.1.2	Appropriate mapping, cataloging and management of identified special sites.	NB AMK	14						

<b>Notes</b>	A demonstration of the GIS system confirmed that point and shape files have been created to document ecologically important communities and/or ecological features, historic sites (i.e. cemeteries, old home sites and historic trail locations). For example, the location of cemeteries on Green Ridge State Forest were observed on GIS maps and confirmed during field observations of the North Craft Cemetery; these sites are identified in the field with signs and maintained. In some cases cemeteries are fenced for protection as observed in the field on the Chesapeake SF at the Walker Family site. Protection of the Braddock Trail was observed within the Savage River State Forest. As confirmed through interviews and observations, field staff are trained and equipped with GPS equipment that is routinely used to document new features or refine the location of existing features.
--------------	---

**Objectives 8-13 are N.A.**

**Objective 14. Legal and Regulatory Compliance.**

Compliance with applicable federal, provincial, state and local laws and regulations.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<b>14.1</b>	<b>Program Participants shall take appropriate steps to comply with applicable federal, provincial, state and local forestry and related social and environmental laws and regulations.</b>	NB	14						
<b>Notes</b>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<b>14.1.1</b>	Access to relevant laws and regulations in appropriate locations.	NB	14						
<b>Notes</b>	The Division of State Documents ( <a href="http://www.dsd.state.md.us/">http://www.dsd.state.md.us/</a> and The Code of Maryland Regulations or COMAR ( <a href="http://www.dsd.state.md.us/comar/comar.aspx">http://www.dsd.state.md.us/comar/comar.aspx</a> ) provide on-line access to all of Maryland's laws, regulations, and the Maryland Register.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<b>14.1.2</b>	System to achieve compliance with applicable federal, provincial, state or local laws and regulations.	NB	14						

<i>Notes</i>	All proposals are reviewed by and Interdisciplinary Team, experienced supervisory managers, and the Annapolis staff. Questions are referred to lawyers. A variety of policies and procedures are used to ensure compliance, chief among them Timber Operation Order Operation Order 2011-601: “The purpose of the operation order is to establish guidelines for the sale of forest products, and to insure that legal and uniform procedures are followed statewide in administering such sales... Prior to approval and award of a contract, all forest products sale contracts over \$5,000 will be reviewed by the legal department assigned to DNR for legal form and sufficiency.”								
--------------	--	--	--	--	--	--	--	--	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>14.1.3</i>	Demonstration of commitment to legal compliance through available regulatory action information.	NB	14						
<i>Notes</i>	The team found no reports of legal compliance issues with forestry practices. Efforts continue to enforce ORV rules, and law enforcement personnel who participated in the audits describes a reasonable level of citizen compliance.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>14.2</i>	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>14.2.1</i>	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.	NB	14						
<i>Notes</i>	Maryland Forest Service Policy & Procedure Manual, page 3 describes the overall commitment to comply with laws and regulations. The State of Maryland has laws and policies on all of the issues listed in the indicator. The Division of State Documents ( <a href="http://www.dsd.state.md.us/">http://www.dsd.state.md.us/</a> and The Code of Maryland Regulations or COMAR ( <a href="http://www.dsd.state.md.us/comar/comar.aspx">http://www.dsd.state.md.us/comar/comar.aspx</a> ) provide on-line access to all of Maryland’s laws, regulations, and the Maryland Register. Postings for worker’s rights, applicable laws, and safety were observed.								

	<b>2010-2014 Requirement</b>	Audit -or	<b><u>C</u></b>	<b><u>EXR</u></b>	<b><u>Maj</u></b>	<b><u>Min</u></b>	<b><u>OFI</u></b>	<b><u>Likely Gap *</u></b>	<b><u>Likely Conf. *</u></b>
14.2.2	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.	NB	14						
<i>Notes</i>	There were no ILO-related complaints								

**Objective 15. Forestry Research, Science, and Technology.**

To support forestry research, science, and technology, upon which sustainable forest management decisions are based.

	<b>2010-2014 Requirement</b>	Audit -or	<b><u>C</u></b>	<b><u>EXR</u></b>	<b><u>Maj</u></b>	<b><u>Min</u></b>	<b><u>OFI</u></b>	<b><u>Likely Gap *</u></b>	<b><u>Likely Conf. *</u></b>
15.1	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<b><u>C</u></b>	<b><u>EXR</u></b>	<b><u>Maj</u></b>	<b><u>Min</u></b>	<b><u>OFI</u></b>	<b><u>Likely Gap *</u></b>	<b><u>Likely Conf. *</u></b>
--	------------------------------	--------------	-----------------	-------------------	-------------------	-------------------	-------------------	--------------------------------	----------------------------------

15.1.1	<p>Financial or in-kind support of research to address questions of relevance in the region of operations. The research shall include some of the following issues:</p> <ul style="list-style-type: none"> <li>a. forest health, productivity, and ecosystem functions;</li> <li>b. chemical efficiency, use rate and integrated pest management;</li> <li>c. water quality and/or effectiveness of best management practices including effectiveness of water quality and best management practices for protecting the quality, diversity and distributions of fish and wildlife habitats;</li> <li>d. wildlife management at stand- and landscape-levels;</li> <li>e. conservation of biological diversity;</li> <li>f. ecological impacts of bioenergy feedstock removals on productivity, wildlife habitat, water quality and other ecosystem functions;</li> <li>g. climate change research for both adaptation and mitigation;</li> <li>h. social issues;</li> <li>i. forest operations efficiencies and economics;</li> <li>j. energy efficiency;</li> <li>k. life cycle assessment;</li> <li>l. avoidance of illegal logging; and</li> <li>m. avoidance of controversial sources.</li> </ul>	NB	14						
<i>Notes</i>	MD DNR state forests, parks and wildlife management areas serve as sites for a variety of university, federal, and state research projects, recently including cerulean warbler, salamanders, use of fire and harvesting to manage invasive plants and shale barren restoration.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
15.1.2	Research on genetically engineered trees via forest tree biotechnology shall adhere to all applicable federal, state, and provincial regulations and international protocols.	NA							
<i>Notes</i>	NA								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
15.2	<b>Program Participants shall individually <u>and/or</u> 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.</b>	NB	14						

<i>Notes</i>	Maryland DNR is a supporter of the Maryland-Delaware SFI Implementation Committee.
--------------	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
15.2.1	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.	NB	14						
<i>Notes</i>	This requirement is satisfied by the DNR's support of the SIC Committees.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
15.3	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
15.3.1	Where available, monitor information generated from regional climate models on long-term forest health, productivity and economic viability.	NB	14						
<i>Notes</i>	Monitoring is done by the Maryland DNR Office for a Sustainable Future, Jack Perdue and others. Maryland DNR is part of the Maryland governor's initiative on climate change. Maryland statewide forest assessment will include climate change impacts.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
--	------------------------------	--------------	----------	------------	------------	------------	------------	-------------------------	---------------------------

15.3.2	Program Participants are knowledgeable about climate change impacts on wildlife, wildlife habitats and conservation of biological diversity through international, national, regional or local programs.	NB	14						
<i>Notes</i>	Monitoring is done by the Maryland DNR Office for a Sustainable Future, Jack Perdue and others. Maryland DNR is part of the Maryland governor's initiative on climate change. Maryland statewide forest assessment will include climate change impacts.								

**Objective 16. Training and Education.**

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

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.1	<b>Program Participants shall require appropriate training of personnel and contractors so that they are competent to fulfill their responsibilities under the SFI 2010-2014 Standard.</b>	NB	14						
<i>Notes</i>	See indicators.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.1.1	Written statement of commitment to the SFI 2010-2014 Standard communicated throughout the organization, particularly to facility and woodland managers, fiber sourcing staff and field foresters.	NB	14						
<i>Notes</i>	Confirmed the Maryland governor's statement of commitment to SFI (and FSC) for all of Maryland's state forests.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.1.2	Assignment and understanding of roles and responsibilities for achieving SFI 2010-2014 Standard objectives.	NB	14						
<i>Notes</i>	All staff involved in the audit demonstrated a clear understanding of their roles.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.1.3	Staff education and training sufficient to their roles and responsibilities.	NB	14						

<i>Notes</i>	Interviews confirmed strong understanding of range of topics associated with job duties. DNR requires all Licensed Forester employees to be state Registered Foresters which requires 8 hours of continuing education each year. Confirmed by review of training certificates for training occurring since the 2013 audit for Wade Dorsey and Scott Campbell.
--------------	---

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.1.4	Contractor education and training sufficient to their roles and responsibilities.	NB	14						
<i>Notes</i>	Loggers have Maryland Master Logger credential or equivalent (see next indicator).								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.1.5	Forestry enterprises shall have a program for the use of certified logging professionals (where available) and qualified logging professionals.	NB	14						
<i>Notes</i>	All harvests are conducted by logging crews with one or more Maryland Master Loggers. Foresters check these credentials by maintaining a list of trained loggers, reviewing the list against web sites listing trained loggers, and then using the list to confirm that trained loggers are involved in each sale other than minor firewood sales. Bid package requires Master Logger to operate the sale.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
16.2	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>

16.2.1	<p>Participation in or support of SFI Implementation Committees to establish criteria and identify delivery mechanisms for wood producers' training courses that address:</p> <ul style="list-style-type: none"> <li>a. awareness of sustainable forestry principles and the SFI program;</li> <li>b. best management practices, including streamside management and road construction, maintenance and retirement;</li> <li>c. reforestation, invasive exotic plants and animals, forest resource conservation, aesthetics, and special sites;</li> <li>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);</li> <li>e. logging safety;</li> <li>f. U.S. Occupational Safety and Health Administration (OSHA) and Canadian Centre for Occupational Health and Safety (COHS) regulations, wage and hour rules, and other provincial, state and local employment laws;</li> <li>g. transportation issues;</li> <li>h. business management;</li> <li>i. public policy and outreach; and</li> <li>j. awareness of emerging technologies.</li> </ul>	NB	14						
<b>Notes</b>	This requirement is satisfied by the DNR's participation in the SIC.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
--	------------------------------	--------------	----------	------------	------------	------------	------------	-------------------------	---------------------------

16.2.2	<p>Participation in or support of SFI Implementation Committees to establish criteria for recognition of logger certification programs, where they exist, that include:</p> <ul style="list-style-type: none"> <li>a. completion of SFI Implementation Committee recognized logger training programs and meeting continuing education requirements of the training program;</li> <li>b. independent in-the-forest verification of conformance with the logger certification program standards;</li> <li>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;</li> <li>d. use of best management practices to protect water quality;</li> <li>e. logging safety;</li> <li>f. compliance with acceptable silviculture and utilization standards;</li> <li>g. aesthetic management techniques employed where applicable; and</li> <li>h. adherence to a management or harvest plan that is site specific and agreed to by the forest landowner.</li> </ul>	NB	14							
<b>Notes</b>	<p>Maryland does not have a logger certification program at this time. It does have the Maryland Master Logger Program which recognizes logging operators who have completed the four core courses and have submitted proof of current First Aid and CPR training. The core training includes: logging safety and OSHA regulations, sediment and erosion control, logging aesthetics, spill prevention, forest ecology and silviculture, threatened and endangered species and logger activism. There is an 8-hour per two years continuing education requirement as well.</p>									

**Objective 17. Community Involvement in the Practice of Sustainable Forestry.**

To broaden the practice of sustainable forestry by encouraging the public and forestry community to participate in the commitment to sustainable forestry, and publicly report progress.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.1	<p><b>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.</b></p>	NB	14						

<i>Notes</i>	See evidence below.
--------------	---------------------

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.1.1	Support, including financial, for efforts of SFI Implementation Committees.	NB	14						
<i>Notes</i>	Maryland DNR makes an annual financial contribution directed mostly to training. Confirmed evidence of financial support for the Maryland-Delaware SFI Implementation Committee focused on Master Logger Program. A MOU is in place between Maryland DNR and University of Maryland Extension wherein Maryland DNR provides funding (\$28,000 over five years) and extension provides support for the Maryland Master Logger Program. This is the main financial support provided by Maryland DNR for the Maryland SFI Implementation Committee and comprises support for logger training as well.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.1.2	Support for the development of educational materials for use with forest landowners (e.g. information packets, websites, newsletters, workshops, tours, etc.).	NB	14						
<i>Notes</i>	This requirement is satisfied by the DNR's participation in the SIC. The DNR website has links to many forestry related websites.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.1.3	Support for the development of regional, state or provincial information materials that provide forest landowners with practical approaches for addressing special sites and biological diversity issues, such as invasive exotic plants and animals, specific wildlife habitat, Forests with Exceptional Conservation Value, and threatened and endangered species.	NB	14						
<i>Notes</i>	This requirement is satisfied by the DNR's participation in the SIC.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
--	------------------------------	--------------	----------	------------	------------	------------	------------	-------------------------	---------------------------

17.1.4	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.	NB	14						
<i>Notes</i>	Maryland has a robust program called “Program Open Space” <a href="http://www.dnr.state.md.us/land/landconservation.asp">http://www.dnr.state.md.us/land/landconservation.asp</a> .								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.1.5	Program Participants are knowledgeable about credible regional conservation planning and priority-setting efforts that include a broad range of stakeholders and have a program to take into account the results of these efforts in planning.	NB	14						
<i>Notes</i>	ID Team and an extensive involvement of specialists ensure such knowledge (see Indicator 4.2.2 above). Further, the Maryland Forest Service works closely with TNC on a variety of forest conservation efforts, including DFS, FIDS, and conservation of special sites.  Field audit sites provided good examples from the ID Team process from the past 12 months.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.2	<b>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.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.2.1	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.	NB	14						

<i>Notes</i>	The DNR has a very informative well designed website, including a section titled “Education Resources”, that satisfies this requirement.
--------------	--

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.3	<b>Program Participants shall establish, at the state, provincial, or other appropriate levels, procedures to address concerns raised by loggers, consulting foresters, employees, <u>unions</u>, the public or other Program Participants regarding practices that appear inconsistent with the SFI Standard principles and objectives.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.3.1	Support for SFI Implementation Committees (e.g. toll free numbers and other efforts) to address concerns about apparent nonconforming practices.	NB	14						
<i>Notes</i>	This requirement is satisfied by the DNR’s participation in the SIC.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
17.3.2	Process to receive and respond to public inquiries. SFI Implementation Committees shall submit data annually to SFI Inc. regarding concerns received and responses.	NB	14						
<i>Notes</i>	This requirement is satisfied by the DNR’s participation in the SIC.								

**Objective 18. Public Land Management Responsibilities.**

To promote and implement sustainable forest management on public lands.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>18.1</i>	<b>Program Participants with forest management responsibilities on public lands shall participate in the development of public land planning and management processes.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>18.1.1</i>	Involvement in public land planning and management activities with appropriate governmental entities and the public.	NB	14						
<i>Notes</i>	Maryland Forest Service has for many years developed and implemented an approach to annual (project) and long-term planning that includes significant public involvement. The project plans are detailed in Annual Work Plans, with a formal process for informing the public of proposals and seeking input. Further, each forest's Management Plan provides a good description of activities, and there are public review and comment steps. Finally there are citizen's advisory committees for each forest (CFL and Pocomoke State Forest share a committee) that meet periodically.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>18.1.2</i>	Appropriate contact with local stakeholders over forest management issues through state, provincial, federal or independent collaboration.	NB	14						
<i>Notes</i>	Public can comment through the Annual Work Plan Review meetings, Citizens Advisory Committee meetings, and the management plan review.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>18.2</i>	<b>Program Participants with forest management responsibilities on public lands shall confer with affected indigenous peoples.</b>	NB	14						
<i>Notes</i>	See indicator below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
18.2.1	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; and 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.	NB	14						
<i>Notes</i>	Interviews indicate that Forest managers in both regions have made contact with tribal leaders and established dialog. Chief Winterhawk site on the Citizens Advisory Committee for the CPSF.								

**Objective 19. Communications and Public Reporting.**

To broaden the practice of sustainable forestry by documenting progress and opportunities for improvement.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
19.1	<b>A Certified 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 2010-2014 Standard.</b>	NB	14						
<i>Notes</i>	NSF has prepared the summary report; Maryland Forest Service required to provide this summary audit report to SFI, Inc. Report is also on the Maryland Forest Service's web site ( <a href="http://www.dnr.state.md.us/forests/forestcert.asp">http://www.dnr.state.md.us/forests/forestcert.asp</a> ).								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
--	------------------------------	--------------	----------	------------	------------	------------	------------	-------------------------	---------------------------

19.1.1	The summary audit report submitted by the <i>Program Participant</i> (one copy must be in English), shall include, at a minimum, a. a description of the audit process, <i>objectives</i> and scope; b. a description of substitute <i>indicators</i> , if any, used in the audit and a rationale for each; c. the name of <i>Program Participant</i> that was audited, including its SFI representative; d. a general description of the <i>Program Participant's</i> forestland and manufacturing operations included in the audit; e. the name of the <i>certification body</i> and <i>lead auditor</i> (names of the <i>audit team</i> members, including <i>technical experts</i> may be included at the discretion of the <i>audit team</i> and <i>Program Participant</i> ); f. the dates the certification was conducted and completed; g. 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 h. the certification decision.	NB	14						
<b>Notes</b>	NSF has prepared the summary report to include all of the above items. Confirmed the 2013 report is on the SFI Inc. website.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
19.2	<b>Program Participants shall report annually to SFI Inc. on their conformance with the SFI 2010-2014 Standard.</b>	NB	14						
<b>Notes</b>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
19.2.1	Prompt response to the SFI annual progress report.	NB	14						
<b>Notes</b>	Confirmed with SFI, Inc. 2013 report provided nearly on time and is complete (Rachel Dierolf, SFI Inc. email).								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
19.2.2	Recordkeeping for all the categories of information needed for SFI annual progress reports.	NB	14						
<i>Notes</i>	Review of the 2013 report indicates recordkeeping is adequate.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
19.2.3	Maintenance of copies of past reports to document progress and improvements to demonstrate conformance to the SFI 2010-2014 Standard.	NB	14						
<i>Notes</i>	A copy of most recent report was provided to the NSF Lead Auditor. SFI Inc. has changed the approach to the reports, making it more difficult for Program Participants to maintain a copy.								

**Objective 20. Management Review and Continual Improvement.**

To promote continual improvement in the practice of sustainable forestry, and to monitor, measure and report performance in achieving the commitment to sustainable forestry.

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
20.1	<b>Program Participants shall establish a management review system to examine findings and progress in implementing the SFI Standard, to make appropriate improvements in programs, and to inform their employees of changes.</b>	NB	14						
<i>Notes</i>	See indicators below.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
--	------------------------------	--------------	----------	------------	------------	------------	------------	-------------------------	---------------------------

20.1.1	System to review commitments, programs and procedures to evaluate effectiveness. Note: For multi-site programs the auditing requirements of Section 9 or the ISO MD-1 requirements must be followed (see Multi-site Checklist); at a minimum internal audits or monitoring that spans all sites and addresses the relevant part of the SFI Standard is expected.	NB	14						
<b>Notes</b>	<p><b>OFI: There is an opportunity to improve the internal audit process by addressing components of the SFI Standard other than Harvesting and silviculture.</b></p> <p>The system includes the use of harvest monitoring forms as well as meetings between field staff and state forest managers (all staff at each state forest work from the same office as their managers).</p> <p>The internal audits were led by Jack Perdue, using the post-activity checklist to review 21 harvest sites.</p> <p>The internal audit team included the foresters involved in the program (state and contract foresters).</p>								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
20.1.2	System for collecting, reviewing, and reporting information to management regarding progress in achieving SFI 2010-2014 Standard objectives and performance measures.	NB	14						
<b>Notes</b>	Jack Perdue, Forest Resource Planning audited randomly-selected sites in each of the Maryland State Forests. These reviews occurred during fall/winter of 2013 and winter/spring 2014. Reviews were documented using Internal Silvicultural Audits procedure which includes "Forest Practice Review" form.								

	<b>2010-2014 Requirement</b>	Audit -or	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
20.1.3	Annual review of progress by management and determination of changes and improvements necessary to continually improve conformance to the SFI 2010-2014 Standard.	NB	14						
<b>Notes</b>	An annual management review was conducted on November, 26, 2013 and was attended by the Forest Service head Steve Koehn and other senior staff and a representative from the contract forest consulting firm. The review included topics from the 2013 third-party audit findings, SFI and FSC Standard changes and a discussion on social impacts.								

### **Multi-site Certification – Two Options**

A multi-site organization is defined as 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.

Organization does **NOT** meet the definition above; the remaining questions do not apply and all remaining portions of the multi-site checklists may be deleted from the report.

#### **Option 1: Alternate Approach to Multi-site Certification Sampling based on the Requirements for the SFI 2010-2014 Program, Section 9, Part 5.1 & Appendix 1**

- a) What specific activities are planned, controlled or managed at the central office?  
Management review, budgets, personnel, policies.
- b) For each activity, provide evidence:  
Policies were reviewed and included statements in management plans, Operation Order 2011-601 “Timber Operation Order”, policy documents for each region, and overall policies on certification provided to the team and described above. The program is quite centralized, with variation in the two districts due to different bio-physical conditions.

#### **General Eligibility Criteria:**

A legal or contractual link shall exist between all sites.

Yes  No Evidence Web sites, plans confirm all lands owned by State of Maryland and covered by laws governing state forests.

The scope and scale of activities carried out by participating sites shall be similar.

Yes  No Evidence The four management plans that cover the six state forests within the scope describe basically the same goals, objectives, and practices.

The management system framework shall be consistent across all sites (allowing for site level procedures to reflect variable local factors).

Yes  No Evidence Management plans describe procedures and policies which are consistent across all forests excepting some variation in the two regions that is due to different bio-physical conditions in eastern and western Maryland.

#### **Central Function Requirements:**

Provide a commitment on behalf of the whole multi-site organization to establish and maintain practices and procedures in accordance with the requirements of the relevant standard.

Yes  No Evidence Governor’s commitment.

Provide all the sites with information and guidance needed for effective implementation and maintenance of practices and procedures in accordance with the relevant standard.

Yes  No Evidence Jack Perdue is responsible for “Public Lands Stewardship”. He provides guidance, templates, etc. used for most aspects of state forest management and for certification-

specific issues.

Maintain the organizational or contractual connection with all sites covered by the multisite Organization including the right of the Central Function to exclude any site from participation in the certification in case of serious non-conformities with the relevant standard.

Yes       No    Evidence    State forester's efforts to meet Governor's commitment covers all sites.

Keep a register of all the sites of the multi-site organization, including (for SFI 2010-2014 Standard) the forest area associated with each participating site.

Yes       No    Evidence    Certificate covers all Maryland's state forests listed; the list of certified forests is on the web site..

Maintain an internal audit or monitoring program sufficient to provide annual performance data on overall organizational conformance with the relevant standard.

Yes       No    Evidence    Conformity tables were prepared to assess the readiness of the districts; not conducted at the forest level initially. Harvest monitoring forms. New ISA (Internal Silvicultural Audits) procedure which includes "Forest Practice Review" checklist is in place, and a sample of sites was reviewed prior to the NSF audit. Confirmed the internal audit included a review of harvesting operations on 21 sites.

Operate a review of the conformity of sites based on results of internal audit and/or monitoring data sufficient to assess Organizational performance as a whole rather than at the individual site level.

Yes       No    Evidence    Jack Perdue led internal audits in each of the involved units, involving randomly-selected completed harvests. New ISA (Internal Silvicultural Audits) procedure which includes "Forest Practice Review" form is a key part of these audits, and the completed forms were reviewed by the audit team. This process is quite robust at the field level.

Establish corrective and preventive measures if required and evaluate the effectiveness of corrective actions taken.

Yes       No    Evidence    Corrective measures would be listed on the "Forest Practices Review" form. No follow-up actions were entered on the forms reviewed by the audit team.

Establish procedures for inclusion of new sites within the multi-site organization including an internal assessment of conformity with the standard, implementation of corrective and preventive measures and a requirement to inform the relevant certification body of changes in participation prior to including the sites within the scope of the certification.

Yes       No    Evidence    Maryland's largest state forests are included.

### **Individual Site Functions and Responsibilities**

Sites implement and maintain the requirements of the relevant standard.

Yes       No    Evidence    See matrix above.

Sites respond effectively to all requests from the Central Function or certification body for relevant data, documentation or other information whether in connection with formal audits or reviews or otherwise.

Yes       No    Evidence    Sites are prepared to address non-conformances.

Sites provide full co-operation and assistance in respect of the satisfactory completion of internal audits, reviews, monitoring, relevant routine enquiries or corrective actions.

Yes       No    Evidence    Interviews and review of the notes of the formal management review confirmed that the sites provided co-operation.

Sites implement relevant corrective and preventive actions established by the central office.

Yes       No    Evidence    Interviews and review of the notes of the formal management review. No follow-up actions were entered on the forms reviewed by the audit team.

**Appendix IV**



**Sites and Audit Participants**



**MARYLAND**  
DEPARTMENT OF  
NATURAL RESOURCES

Martin O'Malley, Governor  
Anthony G. Brown, Lt. Governor  
Joseph P. Gill, Secretary  
Frank W. Dawson III, Deputy Secretary

**April 7, 2014**  
**2014 Certification Audit Sign-in**

Name	Contact Info
1 <u>Brett Coakley / Fisheries</u>	<u>bcoakley@dnr.state.md.us</u>
2 <u>Beth Hill DLC</u>	<u>dorchesterlumber@yahoo.com</u>
3 <u>Skip Jones</u>	<u>public forest services.com</u> <u>skip.jones@</u>
4 <u>Jed Perdue MD Forest Service</u>	<u>jperdue@dnr.state.md.us</u>
5 <u>Jane Koehn "</u>	<u>JKoehn@ "</u>
6 <u>Jean Conners PARKER FOR. SERV. 302-841-8766</u>	
7 <u>Stacy Ksham PFS</u>	
8 <u>David Ray TNC</u>	<u>850 241 6837</u>
9 <u>Anne Hairston-Strang MFS watershed</u>	<u>astrang@dnr.state.md.us</u>
10 <u>Patrick Graves DNR RAS</u>	<u>p.graves@dnr.state.md.us</u>
11 <u>Kip Powers DNR Forest Service</u>	<u>kpowers@dnr.state.md.us</u>
12 <u>Tony DiPaola Glatfelter</u>	<u>antony.dipaola@glatfelter.com</u>
13 <u>Kenny Posey PAUL JONES</u>	<u>KJP4410@ADL.COM</u>

	Name	Contact Info
14	SGT. STEPHEN PAYNE	SPAYNE@DMR.STATE.MD.US
15	NORMAN BOSTWICK	
16	Kenneth Jolly	Kjolly@dmr.state.md.us
17	DM Kimm	
18	John F. Wilson	jfwilson@dmr.state.md.us
19	Anne Marie Kittredge	
20	Alexander Clark	
21	Mary Pines, CAC - Equestrian	(410) 726-8300
22	Mike Schofield, DMR	(410) 713-5091
23		
24		
25		
26		
27		
28		
29		
30		



Martin O'Malley, Governor  
Anthony G. Brown, Lt. Governor  
Joseph P. Gill, Secretary  
Frank W. Dawson III, Deputy Secretary

# FOREST CERTIFICATION AUDIT

APRIL 9, 2014

PLEASE SIGN IN

WADE Dorsey	MD Forest Service
Ed Thompson	MD WTS
Jody Johnson	MD Fisheries
Francis Jumbo	Retired - Fraser - Allegany County Forest Board
George Eberling	MD Forest Service
Kenneth Jolly	MD FOREST SERVICE
Stephen Carr	Land Trails Planner (Annapolis)
Jim Mullan	MD DNR WTS
JEFF SWEITZER	MD. NATURAL RESOURCES POLICE
David Gailey	MD DNR Forest Service
Ken ROBERTS	NewPage Corp.
Ken Gibbs	NewPage
KORAN BARTON	NSF
Anne M. Kittredge	SCS.
John Denning	MD DNR



Martin O'Malley, Governor  
Anthony G. Brown, Lt. Governor  
Joseph P. Gill, Secretary  
Frank W. Dawson III, Deputy Secretary

**FOREST CERTIFICATION AUDIT**  
**APRIL 9, 2014**

PLEASE SIGN IN

<i>Mark DeBevoise</i>	<i>GRSF</i>	
<i>Jason W. Morgan</i>	<i>GRSF</i>	
<i>Scott J. Lynter</i>	<i>SRSF</i>	
<i>Michael Johnson</i>	<i>SRSF</i>	
<i>Roger Rounde</i>	<i>SRSF</i>	
<i>Bo Tiger</i>	<i>PGSF</i>	
<i>Noah Rowe</i>	<i>PGSF</i>	
<i>Jason Sabice</i>	<i>PGSF</i>	
<i>Jeremie Foy</i>	<i>SRSF</i>	
<i>Douglas Foy</i>	<i>SRSF</i>	
<i>Tom Mathewz</i>	<i>GRSF</i>	<i>Citizen Advisory Bd.</i>
<i>Pete Kelly</i>	<i>GRSF</i>	
<i>Heather Tuck</i>	<i>GRSF</i>	
<i>Jason Lamb</i>	<i>GRSF</i>	
<i>Jack Perdue</i>	<i>MFS</i>	<i>jperdue@dnr.state.md.us</i>

**MD DNR Forest Service  
April 10, 2014  
Potomac Garrett State Forest**

**2014 Forest Certification Audit**

**Office & Field Tour**

Attending:

1. Anne Marie Kittredge – SCS (Auditor)
2. Kenneth Jolly -DNR- FS
3. George Eberling – DNR-FS
4. Dan Feller - DNR WHS
5. Steve Carr – DNR LAP
6. Deborah Landau – TNC
7. Noah Rawe – DNR- PGSF
8. Jason Savage – DNR- PGSF
9. Bo Sliger – DNR- PGSF
10. John Denning – DNR- PGSF



FOREST CERTIFICATION AUDIT  
 Thursday, April 10, 2014  
 Savage River State Forest

NAME	AFFILIATION
Roger Rounds	SRSF
Mike Johnson	SRSF
Douglas Foy	SRSF
Janet Hadley	Savage River
Scott Mitchell	Savage River
Jeremie Foy	SRSF
LINDSAY WOLF	SRSF
Ashley Moreland	SRSF
Wade E. Day	SRSF
Jocheal Boyler	SRSF
George Ebenitz	MFS
DAN FELLER	WILDLIFE + HERITAGE
Anne M Kittredge	SCS
Kyle Meister	SCS
Steve Carr	LAP
<b>ARON J. BOWEN</b>	<b>AUDITOR</b>
Jack Perdue	MFS
Karen W. John	MFS
Deborah Landan	TVC
Mark D. Book	DNR



**MD DNR Forest Service  
April 11, 2014  
New Germany State Park**

**2014 Forest Certification Audit**

**Closing Meeting**

Attending:

1. Norman Boatwright – NSF-ISR
2. Kyle Meister - SCS
3. Anne Marie Kittredge - SCS
4. Steve Koehn – MD DNR Forest Service
5. Kenneth Jolly – MD DNR Forest Service
6. George Eberling – MD DNR Forest Service
7. Wade Dorsey – MD DNR Forest Service
8. Scott Campbell – MD DNR Forest Service
9. Mike Johnson – MD DNR Forest Service
10. Mark Beals – MD DNR Forest Service
11. Jesse Morgan – MD DNR Forest Service
12. John Denning – MD DNR Forest Service
13. Noah Rawe – MD DNR Forest Service
14. Jason Savage – MD DNR Forest Service
15. Jack Perdue – MD DNR Forest Service



## 2013 Audit Field Sites

<b>Date:</b> April 7, 2014 Chesapeake & Pocomoke State Forests	
<b>FMU / Location / sites visited</b>	<b>Activities / notes</b>
Chesapeake Forest HQ (Auditors: Meister, Boatwright, Kittredge together all day)	Opening Meeting: Introductions, FSC updates, review of open CARs, final field site selections, interviews.
P02 Nazareth Church - Tract 6, S6, S8	Pond pine restoration harvest completed during 2013 and not yet burned. Seed tree harvest for DFS habitat enhancement; loblolly, pitch and pond pine and large mast producing oaks retained in islands and dispersed throughout stand. LWD and snags observed. Some damage to residuals along skid road that was discussed with operators. Some slash and tops remain that could be an issue for future fire prescription. A dozen pieces of firewood remain on landing.
P02 Nazareth Church - Tract 4, S5; Tract 5, S1,S15	Pre-commercial thinning of loblolly pine completed manually under contract. Herbicides not used. Will encourage oak and other hardwoods.
P02 Nazareth Church - Tract 4, S19	37-acre FY2014 proposed final harvest of loblolly pine with retention of oak and pine to enhance DFS habitat. This stand regenerated naturally ~1917. ID team, CAC and public review complete with no comments received. Retention not yet marked. Gate and signage ('No motorized vehicles') observed. Discussion of availability of other 70-year old stands in other zones, most of which are protected from management activities.
P02 Nazareth Church - Tract 6, S6, S8	Pond pine restoration - South end of treatments observed earlier in the day. Pond pine restoration harvest completed during 2013; fire prescription complete. Seed tree harvest within general management zone for DFS habitat enhancement; loblolly, pitch and pond pine and large mast producing oaks retained in islands and dispersed throughout stand. LWD and snags observed. Some damage to residuals along skid road that was discussed with operators. Some slash and tops remain that could be an issue for future fire prescription.
P07 Chandler Tract 23, S1	FY2014 1 <sup>st</sup> thinning in loblolly pine retaining 80-90 ft 2 BA and mast trees for habitat. 6-acre section of potential future DFS habitat and nearly adjacent to future OG. Access road recently repaired; previously an ORV trail. Observed that ORVs are occasionally accessing this area although the road is gated and signed and patrolled by Natural Resource Police (interviewed) and State Forest staff.
P07 P06 Hudson Tarr-Mountain Bike Trail	4.5-mile bike trail addition to an existing trail; previously existed as an old road. Construction completed with funding from grants and including signage, markers and gate. A timber sale preceded the trail construction and is visible from the trail; however, slash within the trail buffer has been cleared. More recent grant will be used for trail maps. Discussion of the development of digital downloadable maps and a new DNR app for trails.
WR40-Dunn Swamp Complex S 25, 26	1 <sup>st</sup> thinning in loblolly pine (every 5 <sup>th</sup> row removed) and retained oak for mast. Discussion of utilization and rutting guidelines; some poles left behind from an incomplete load.
<b>Date:</b> April 8, 2014: 8am-5pm. (2 teams; teams re-join at last stop) Chesapeake & Pocomoke SF	
<b>FMU / Location / sites visited</b>	<b>Activities / notes</b>

Chesapeake & Pocomoke SF (Auditor team 1: Kittredge and MD DNR staff)	
W08 Bacon Complex, S10 (Kittredge)	1 <sup>st</sup> thinning in loblolly pine and DFS-friendly habitat; residual damage checked and not observed. Boundary paint and signs observed. Poled ford used to cross old-field ditch. Stand too young for LWD or snags. Gate used to control access.
Walker Cemetery; Spontaneous, unplanned stop	Protection of special sites (Old homestead and fenced Walker Cemetery) observed. Fencing replaced about 5 years ago. Map of cemeteries presented and reviewed.
Tom Tyler Trail (Kittredge)	700-acre tract with trail head sign, interpretive signs, picnic tables, kiosk with photos and information about FSC conservation, BMPs and MD DNR goals, improved parking area; tract includes an Atlantic White Cedar Swamp. Prescribed fire was used following loblolly removal a while ago to enhance ESA zone 1 for RTE. Observed eagle. This area is posted for no hunting. Fences used to block ORV access. Observed that ORVs are occasionally accessing this area although the road is gated and signed and patrolled by Natural Resource Police (interviewed) and State Forest staff. 8 years ago staff resolved a similar issue on this property and are pursuing this one as well.
D14. Indiantown Complex, S27, 28, 29 (Kittredge)	1 <sup>st</sup> thinning in loblolly pine for Delmarva Bay Restoration based on MD DNR Natural Heritage prescriptions and advice. Landing blocked to restrict access. This stand was bulldozed by previous ownership; legacy trees are largely not present due to past practices although mature cherry, red oak, red maple and snags were observed in windrows and legacy pines were observed along roads and boundaries. Residual damaged checked; none found. Excellent examples of communication and cooperation between agency staff from different divisions.
D14. Indiantown Complex, S5,6,7,9,10 (Kittredge)	Restoration project in loblolly pine for Delmarva Bay Restoration and other RTE species based on MD DNR Natural Heritage prescriptions and advice. Prescribed fire used in 2013. Fire break and permanent plot stakes observed. MD DNR Natural Heritage flagged the edge of the pool. Machines were not allowed in the Bay pool where Heritage staff girdled loblolly pines. Nearly adjacent pool identified in air photo by Heritage; polygon and points loaded to GPS for forestry staff who flagged the boundary of the pool as part of the continuation of this restoration project. Excellent examples of communication and cooperation between agency staff from different divisions.
D21. Lecompte Complex, S3, 4 (Kittredge)	85-acre 1 <sup>st</sup> thinning in loblolly pine with mast trees retained for DFS habitat enhancement. Completed fall 2013 with harvest operation halted for wet periods. Landing free of debris. Large snag observed. Hunting lease area with deer stand with handicap ramp. Boundary paint and signs observed. Gate used to restrict access.
D04. Lindner Complex, S8,9,11,12 (Kittredge)	1 <sup>st</sup> thinning in loblolly pine in DFS habitat. Completed June 2013. Observed oak retention for mast (20"), large loblolly (15"), cavity trees and snags. This stand was bulldozed by previous ownership; legacy trees are largely not present due to past practices although mature cherry, red oak, red maple and snags were observed in windrows and legacy pines were observed along roads and boundaries. Gate used to restrict access. Hunting lease area. Boundary paint and signs observed at back of harvest.
Parker Forestry Office:	Document review and interviews with Parker Forestry and MD DNR staff

(Audit team 2: Boatwright and Meister and MD DNR staff)	(Timber sale and chemical use contracts, inventory/ sustained yield calculations, harvest prescriptions, chemical applications, Delmarva Fox Squirrel habitat map)
W35 – Messick Complex – Stand 8 (pre-commercial thinning)	Pre-commercial thinning adjacent to final harvest unit; completed manually according to contract. Slight ice damage to stand. Interview with tree planting crew in regeneration harvest unit to discuss health and safety issues. Workers were knowledgeable of PPE and emergency procedures.
W17 – RF Richardson Complex – Stand 1 (final harvest)	Clearcut with retention of clumps of conifer and hardwood; individual hardwoods scattered throughout stand. Will herbicide to control tolerant hardwoods; clumps will not be treated, which will allow tolerant hardwoods to remain on-site and mature. Property boundaries clearly marked.
W17 – RF Richardson Complex – Stand 8 (pre-commercial thinning)	Pre-commercial thinning completed manually according to contract. Examination of stream management zones (300' buffer); no harvest zone other than adjacent power line right-of-way.
W17 – RF Richardson Complex – Stand 1 (final harvest)	Overstory removal of 99% of all pine, poplar, and gum with nearly 100% retention of established mid- to over-story oaks. Spray will occur after mapping location of oaks.
D03. Little Blackwater (Auditors: Meister, Boatwright, Kittredge)	Non-native invasive plant control of Callery pear ( <i>Pyrus calleryana</i> ) on wetland meadow and pond restoration site with some areas under lease for agriculture (≈780 acres). Pre-restoration water quality data is available. Successful 2013 invasive species removal efforts were completed within this open field and field edge, and included Callery Pear and Canada thistle. Callery pear has re-appeared along the road and will be treated again in 2014. Email correspondence between MD DNR staff and volunteers from the Chesapeake and Coastal Service, Section Chief for Community-Based Restoration Program was presented and reviewed and confirms that this next phase is on track.
<b>Date:</b> April 9, 2014: 8am-6pm Green Ridge SF	
<b>FMU / Location / sites visited</b>	<b>Activities / notes</b>
Flintstone Fire Hall (Auditors: Meister, Boatwright, Kittredge).	Opening Meeting: Introductions, FSC updates, introduction to 3 western MD DNR State Forests, Shale Barren restoration presentation (MD DNR Natural Heritage), final field site selections, interviews.
GR-01-13 Oldtown Road Salvage	2014 38-acre complete salvage of 106-year old mixed oak stand. Overstory mortality approaches 100% resulting from Memorial Day 2011 hail storm. Snags and cavity trees and islands of live retention retained (pitch pine and oak species) as well as in stream buffers and ravine between harvest blocks. Retention in road-side buffer lower than usual due to mortality. Regeneration was damaged by hail as well as overstory. Silvah OAK will be used to check regeneration following salvage. Some of the smaller trees were producing epicormic sprouts and may stump sprout following harvest. Salvage plans were not expedited; the review process included all review steps. DNR staff completed research of Hercules club present in the understory and determined that it is not a NNIS. Adjacent private inholding owner contacted with no complaints about this treatment. State boundary line and markers observed.  Interviews with logging contractors for health and safety requirements.
GR-02-13 Oldtown Road Salvage	2014 25-acre active salvage of mixed oak stand. Overstory mortality approaches 100% resulting from Memorial Day 2011 hail storm. Snags and cavity trees and islands of live retention retained (pine and oak)

	<p>some of which are located in damp ravine areas as well as a roadside buffer. More live Virginia pine found here than in the previous site and yellow poplar and white pine are found on this site but not the previous site. Upslope edge adjacent to untreated OGEMA area; OG area also affected by the storm damage. Regeneration was damaged by hail as well as overstory. Silvah OAK will be used to check regeneration following salvage. Some of the smaller trees were producing epicormic sprouts and may stump sprout following harvest. Salvage plans were not expedited; the review process included all review steps. It is common for the GRSF staff to specify by contract the retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals. Live white oak observed in the un-cut area are designated to be harvested as part of this treatment although these live stems could be an important element of the dispersed retention if retained. See CAR 2014.x</p> <p>Interview with natural heritage staff and forest technician.</p>
North Craft Cemetery Spontaneous, unplanned observation	New sign installed by MD DNR staff on road marks this small special site/cemetery location. Green Ridge map of cemeteries presented and reviewed.
Malcolm Rd/Anthony's Ridge	<p>TSI and Golden wing warbler habitat improvement project. ~900 acre area and 1 of 3 Special Habitat Areas. Treatments for special species designed to enhance habitat (e.g. Golden Winged Warbler) based on BMPs for these species and including for example 10-acre regeneration harvests with residual stems and a 38-acre thinning in a 40-year old stand. This is a focal area for GWW in MD. Plan completed during 2013 with cooperation from multiple partners. Practices implemented and on schedule.</p> <p>Interview with forest technicians and managers.</p>
St. Johns Rock ORV Trail	Driving tour of a proposed trail location for future ORV trail. Seasonal hunting restrictions only. Some engineering still in progress. Some review completed (stakeholder, CAC, public). Some of this proposed trail coincides with a pre-existing (now gated) Red Dog Road. Baseline independent monitoring and ongoing monitoring are being planned. Some road sections are newly located to avoid RTE habitat and to avoid a stream crossing. Posted speed limit (10 mph) and signage ('authorized vehicles only') at power line. Renegade side trails have been closed/ blocked off. Trail opening date TBD.
Jacobs Road	34-acre pre-commercial thin completed by summer crew during 2013. Crop trees flagged on spacing. Hack & squirt used on 2/3 of stems and chainsaw used on 1/3 of stems.
<b>Date:</b> April 10, 2014: 8am-5pm then 7:30-9:30 pm deliberations (3 teams with individual assignments: Savage River SF field tour or Potomac Garrett SF field tour or New Germany SP Lake House for document review and interviews.	
<b>FMU / Location / sites visited</b>	<b>Activities / notes</b>
Potomac Garrett State Forest HQ: (Kittredge and MD DNR staff)	Introductions, GIS demonstration, Forest Inventory review, NNIS control description, road inventory discussion, staff training record review.
PGSF 17-D (Kittredge)	2013 20-acre completed hack & squirt plus use of loppers by summer crew to complete understory removal of small (<4 " dbh) less desirable species (RM, witch hazel, striped maple). Oak regeneration lacking in this area.
PGSF 17-G (Kittredge)	2013 completed 9-acre clearcut with variable retention in islands and

	with retention of streamside buffer. Excellent oak regeneration present. High deer browse. Area fenced to exclude deer; fencing installed under timber harvest contract as suggested by biologist. Observed large snags, LWD and large den. Next stage already marked (for retention).
PGSF Kindness Demonstration Forest (Kittredge)	Effective interpretive signage developed from funding from grant describes the 2 side-by-side treatments including (a) 8.5-acre overstory removal as a 2 <sup>nd</sup> stage shelterwood that was completed during early spring 2013. The preparatory cut/thinning in 2004 successful in promoting regeneration. Post-harvest area includes advanced regeneration, retained hemlock and retention. (b) 6.5-acre 1 <sup>st</sup> stage of shelterwood system. Thinned from below to 70% stocking as determined SILVAH Oak specifications. Half of area also included understory treatment to cut and treat saplings. Resulting in a stand that consists of closely-spaced but undamaged residual stand.
PGSF Brier Ridge (Kittredge)	Stand A, FY 2012 Annual Work Plan: 2013 completed 47-acre 1 <sup>st</sup> stage of a shelterwood system with a goal of reducing the basal area by one-third in Allegheny hardwood. Large legacy cherry retained as well as other oaks. Observed large snags, LWD and large den. Next stage already marked (for retention). Residual stand damage checked and not observed. Fern control applications completed August 2012. MD DNR Natural Heritage staff assisted with filed delineation of HCVF.
PGSF 34-3 (Kittredge)	28-acre mixed oak stand thinned in 1995 as the 1 <sup>st</sup> stage of a 2-stage shelterwood system that successfully established oak regeneration. The active harvest prescription has been described initially as the 2 <sup>nd</sup> stage of a shelterwood system and most recently as a clear cut with variable retention. The established regeneration was laid over during the October 2012 Super Storm Sandy. This active timber harvest contract required that the operators sever stems greater than 2" in diameter in an attempt to improve the form of damaged advanced regeneration. Ferns, grasses and deer browse identified as potential issues. Tops observed not lopped in an attempt to protect regeneration from deer browse. Unique use of mats on the landing. Retention includes snags and LWD. Roadside buffer maintained for aesthetics. The harvest area includes 10-12 islands of retention some of which are located in proximity to the stand edge however retention does not include dispersed retention and does not characterize natural disturbance regimes of this region in proportion and distribution of live trees. See CAR 2014.x and CAR 2014.x
PGSF Piney Mt.: Compartment 45 (Kittredge)	Red Spruce Restoration. Technical advice was sought from TNC and implemented throughout each of these red spruce restoration projects. Red spruce was once a common component in these highlands and has been displaced by hardwoods throughout this area. Small pockets of residual red spruce can still be found. This effort to re-establish a component of red spruce in this landscape includes this ~ 6-acre stand that has been successfully under planted with native red spruce in consultation and cooperation with TNC within this buffer to the TNC Cranesville Swamp Natural Area (that may be the largest bog in MD). Seedlings were removed from the Monongahela under a TNC permit and planted by MD DNR staff and volunteers at this site and another nearby area. Planting efforts were completed during 2002 and 2004 following a 2002 overstory thinning of this stand. Mature red spruce were retained in the overstory of this stand and observed during this field stop. Another strategy that was described but not observed during the 2014 audit

	<p>program involved a mixed hardwood stand that includes an unusual understory component of red spruce (20-30 stems/acre); a non-commercial release was completed in an attempt to favor this unusual understory.</p>
SRSF Russell Road Salvage (Boatwright)	<p>160-acre salvage resulting from the 2006/2007 Gypsy moth damage and followed by ice damage. with retention of live stems along seeps/streams. Minimal live oak or future seed sources. Some advanced oak regeneration. Salvage operation to be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration. Prescribed fire logistics have not yet been completed but will begin upslope of the salvage in the nearly adjacent sand meadows/barren shale outcrops (RSA) and travel through most of this salvage area to a skid road lower on the slope and stopping before an old growth stand (HCVF). Prescribed fire minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community. Excellent example of research and cooperation with Heritage, TNC and others for assistance with a future prescribed fire prescription of this size.</p> <p>Salvage completed June 2013 and included good SMZs around wet seeps and retention surrounding shale outcrops within the sale area. Haul roads were retired using well constructed water bars. Timber Sale Inspection Reports were detailed.</p>
SRSF Fairview Road Aspen Regeneration (Boatwright)	<p>3 small areas (totaling 6.5 acres) dominated by red maple, big toothed aspen and black cherry. Goal of harvest was to improve habitat for ruffed grouse and goshawk which have known nesting sites in the area. Regeneration cut was completed in July 2013 and included harvesting all merchantable trees and felling all premerchantable stems.</p>
SRSF Fairview Road Salvage (Boatwright)	<p>48-acre salvage resulting from the 2006/2007 Gypsy moth damage and followed by ice damage. Minimal live oak or future seed sources. Harvest included a bridged haul road crossing of an ephemeral stream and was completed in September 2013. Haul road was retired with well - placed water bares hay and grass seed. Timber Sale Inspection Reports were detailed.</p>
SRSF East Shale Road forest road improvement projects (Boatwright)	<p>Maintenance of a heavily used road/trail performed by SF employees and funded by a \$30,000 grant. Work included the replacement of several culverts and graveling sections of the road. The grant funds were exhausted before the graveling portion of the work was completed. This design re-routes the trail to avoid private land. The culvert maintenance permit process is complete and funded by the capital maintenance budget plus recreation funds. Some of the existing trail section is blocked off as part of the redesign and rerouting process. Several side trails blocked/closed with large boulders. Some trail sections improved (stone dressing, new culverts) with the use of \$30,000 recreation grant.</p>
SRSF Posey Row Road regeneration harvest (Boatwright)	<p>78-acre gypsy moth salvage within 1415-acre stand that is landlocked. Timber was sold to the adjoining landowner who also runs a small sawmill. Sale has been extended once. and operated by adjacent Amish operator. Mortality ~ 100% (2007 gypsy moth followed by ice storm) with adequate RO regeneration. SI= 75-85. Road work completed by operator.</p>
SRSF Margroff Place regeneration harvest (Boatwright)	<p>16-acre gypsy moth salvage completed December 2013. Harvested involved removing all merchantable timber (poor quality cherry, oak and red maple). Tract is very steep and harvesting was accomplished by a</p>

	track cutter. Retention was positioned along the north and south sale boundaries. 2 long skid trails were water bared. Log deck and bare spots were seeded and strawed.
SRSF Margroff Place thinning/sanitation (Boatwright)	This sale was not cut as budgeted. Original plan called for a normal Norway Spruce thin. 2 bug spots were discovered during a site inspection. The bug spots and a buffer were harvested and the remaining stand thinned. Log deck had grass and straw.
Whiskey Hollow Thinning/Salvage Unscheduled stop (Boatwright)	Active logging job in a 36-northern hardwood/mixed oak stand. 6% of the stand is dead. Sale is marked by SF employees. Reviewed Pre-Harvest plan and Timber Sale Inspections. Interviewed logger, Butch Glotfelty, who is a Master Logger and observed his spill kit.
New Germany State Park Lake House: (Meister and MD DNR management staff)	State-wide and central office document review and staff interviews (Meister and MD DNR management staff).
Grantsville MD Hotel	Auditor deliberation and preparation for the closing meeting.
<b>Date:</b> April 11, 2014	
<b>FMU / Location / sites visited</b>	<b>Activities / notes</b>
8-11 am	Auditor deliberation and preparation for the closing meeting.
11 am – Noon. New Germany SP Lake House	Closing Meeting: Discussion of preliminary findings, next steps, questions.

**Appendix V**



**SFI Reporting Form**

**One change:  
204,533 total acres**