



# Surveillance Audit Report

2010-2014 Sustainable Forestry Initiative® Standard

May 8, 2013

**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:** Lead Auditor: Mike Ferrucci

Auditor: Anne Marie Kittredge

**D. Audit Dates:** April 22 to 25, 2013

**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):

Previous Minor Non-conformance SFI Indicator 2.3.6 was raised to a Major Non-conformance.

Corrective Action Plan is not required.

Corrective Action Plan is required within sixty days of this visit (for Minor Nonconformances).

CARs will be verified during the next Surveillance Audit.

Corrective Action Plan is required within thirty days of this visit (for Major Nonconformances). The auditor will make arrangements to verify the corrective action has been effectively implemented. The major nonconformance must be closed by the auditor prior to the next scheduled surveillance audit (via desk review), or the certificate may be withdrawn.

Your Corrective Action Plans should be provided through your NSF On-line Interface.

At the conclusion of this Surveillance Audit visit, the following CARs remain open:

MAJOR(S): 0 MINOR(S): 0 Opportunities for Improvement (OFIs) identified: 3

### **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 22, 2013. 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, 2014. *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

Appendix IV: Notes and List of Participants

Appendix V: SFI Reporting Form

**Appendix I**



**Surveillance Notification Letter  
and Audit Schedule**



April 24, 2012

Re: Confirmation of SFI Surveillance Audit, Maryland Forest Service

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

Dear Mr. Perdue

We are scheduled to conduct the FSC and SFI Scope 2012 Surveillance Audits of your state forest system the week of April 22. This letter provides the SFI audit plan; the FSC audit plan is being developed by Anne Marie Kittredge, SCS Lead Auditor.

The SFI audit is a partial 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 22 at 8 pm at the Comfort Inn, 2541 Chestnut Ridge Rd, Grantsville, MD 21536. The closing meeting will occur on Tuesday April 30, 2013 from 10 am to 11:30 am by conference call.

We have previously discussed preliminary itinerary for the eastern forests visit:

- 7 am (optional) breakfast at the Denny's Restaurant in Salisbury;
- 8 am Chesapeake Forest Office;
- 9 am to 4 pm for field visits; 4 pm daily briefing.

I'm expecting that you and Anne Marie will develop the schedule for the western forests.

The field audits will be conducted by two field teams: Anne Marie will cover only the western forests with an FSC-focus (but some elements of the SFI Standard will be included); I will cover western forests with her for two days and then the CSF on the third day, with an SFI-focus (but some elements of FSC will be included). Bios for each of the audit team members follow below.

Please also provide any additional information regarding progress on issues associated with the 1 SFI Major Non-conformances from the 2012 audit: *"Indicator 2.3.6 requires 'Criteria that address harvesting and site preparation to protect soil productivity.' The western forests do not have criteria defining acceptable levels of rutting during harvests."*

During the SFI part of the audit I will:

1. Review progress on achieving SFI objectives and performance measures and the results of the management review of your SFI Program;
2. Review selected components of your SFI program (Objectives 1-7, 16-20); the following Objectives will be the focus: 1-7, 14, 15, 16, and 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 2013 audit will include 4 of these 6 as follows: Chesapeake Forest Lands, Garrett State Forest, Green Ridge State Forest, and the Savage River State Forest. These forests were selected to include a broad cross-section of activities and of the sites (somewhat beyond the required sample size) and due to changes in management approaches (eastern forests) or due to issues that arose during the 2011 audits (western forests). Random sampling was not employed in the selection of these 4 forests

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. As during the certification audit we should plan to have lunch on site 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,



Mike Ferrucci,  
Lead Auditor, NSF-ISR, Ltd.  
Enclosure: Agenda for Surveillance Audit

From JP, Maryland Forest Service: “I had suggested the Potomac Garrett State Forest on the first day since we didn’t get a chance to be there at all last year and wanted Mike to be able to see it. The second day at Green Ridge will get Mike closer east for his trip back east. Then we can finish there the rest of the day after Mike leaves. The third day we can wrap up the west at Savage River.

I have asked the managers to put together their agendas based on visiting all the sites as requested by Anne Marie, and other projects of interest. They should be available early next week.  
Tuesday = Potomac-Garrett Wednesday = Green Ridge Thursday = Savage River”

**Agenda  
Forest Certification Audit  
Of  
Potomac-Garrett State Forest**

**Tuesday, April 23, 2013**

8:30-9:15 (10 min travel)	<b>PGSF Office</b> – Introductions, program discussion, etc.
9:25 – 10:10 (20 min travel)	<b>Lostland Run Road Rehabilitation Project</b> ; review of project and overall roads issues.
10:30 – 11:30  (30 min travel)	<b>Wallman PG-02-12</b> – CTR / firewood contract with Community Action Program / handicapped worker program.  <b>Wallman</b> - Invasive Species Control Project and inventory.  <i>Wallman - (comfort station stop as needed.)</i>
12:00 – 12:45	<b>Lunch</b> - <i>Kindness Demo. Area</i>
12:45 – 1:15 (15 min travel)	<b>Kindness Demo. Area</b> – 2 sites, 6ac. liberation cut, and 6 ac. prep cut with herbicide application for understory veg. control.
1:30- 1:50 (15 min travel)	<b>Brier Ridge</b> – fern control work, marked and sold for harvest.
2:05-2:35 (5 min travel)	<b>Cranesville Rd.</b> – clear-cut with variable retention slash and CWD managed for deer protection.
2:40-3:10 (10 min travel)	<b>Swallow Falls Road</b> – clear cut with variable retention and deer exclosure fencing.
3:20-4:00	<b>Handicapped Hunter Area</b> – combination thinning and regeneration harvest ?
4:00	Adjourn and return to PGSF Office
4:30	Depart from Potomac-Garrett State Forest Office

# **Green Ridge State Forest**

## **FSC/SFI Certification Audit Agenda**

### **April 24, 2013**

08:30: Meet and Greet at Green Ridge State Forest Headquarters

09:30: Visit Dughill Road Post-harvest Site

10:15: Visit Oldtown Orleans Rd Salvage Pre-harvest Site

11:00: Visit Oldtown Orleans Road Active Harvest Thinning Site

12:00: Lunch at Anthonys Ridge

12:30: Visit Anthonys Ridge Special Wildlife Habitat Area

13:15: Visit Green Ridge Road Post-harvest Site

14:00: Visit Manifold Road Post-harvest Site

15:00: Visit East Valley Road Post-harvest Site

15:45: Wrap Up Discussion

16:00: Adjourn

Savage River State Forest  
FSC/SFI Audit Agenda

April 25, 2013

- 8:00 – 8:30 Meet at New Germany State Park Lake House – Make lunch and load up the vans – finalize the agenda
- 8:30 – 9:15 Visit East Shale Road ORV trail (trail work)
- 9:15 – 10:30 Visit Posey Row Sale (in progress)
- 10:30 – 12:00 Visit Bowman Hill Sale (in progress)
- Lunch in transit
- 12:00 – 12:45 Visit Margroff thinning/sanitation (marked but not started)
- 12:45 - 13:00 Visit Maynardier Ridge Sale (in progress)
- 13:00 – 15:40 Russell Road Sale (in progress)
- 15:40 – 16:00 Return to New Germany State Park

Chesapeake Forest and Pocomoke SF Audit  
April 25, 2013 8 AM

CHESAPEAKE FOREST/POCOMOKE STATE FOREST OFFICE  
6572 SNOW HILL ROAD  
SNOW HILL, MD 21863

**8AM** Eastern Shore audit begins - Nassawango Office

**10AM** Travel to field visit sites (transportation and lunch provided)

- WR45 - Foster Estate (1st thinning)
- WR24 - Johnson & Johnson (shelterwood)
- WR37 - Trader (2nd thinning)
- W17 - R.F. Richardson (final harvest)
- W46 - Campbell (1st thinning)
- Active harvests (WR40 - Dunn Swamp, S11 - Peters McAllen, P06 - Hudson)

**5PM** Adjourn

**Michael Ferrucci**  
mferrucci@iforest.com  
26 Commerce Drive, North Branford, CT 06471  
203-887-9248 (Office and Cell Phone)

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

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

Mike Ferrucci has 33 years of forest management experience. His expertise is in sustainable forest management planning; in certification of forests as sustainably managed; in the application of easements for large-scale working forests, and in the ecology, silviculture, and management of mixed species forests, with an emphasis on regeneration and management of native hardwood species. Mike has conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 33 states. Mike has been a member of the Society of American Foresters for over thirty years. He is Past Chair of the SFI Auditor’s Forum. Mike is also a Lecturer at the Yale School of Forestry and Environmental Studies, where he has taught graduate courses and workshops in forest management, harvesting operations, professional forest ethics, private forestry, and financial analysis.

**Anne Marie Kittredge, CF**  
**196 Montague Road**  
**Shutesbury MA 01072**  
**413.259.1756 or 413-230-0465 (Cell)**  
**amkittredge@gmail.com**

**PROFESSIONAL CERTIFICATIONS:**

- ◆ Certified Forester, Society of American Foresters (#60). 1995 to Present.
- ◆ (CFE) SAF Continuing Forestry Education representing thousands of hours of continuing education
- ◆ 3-day ISO 19011 training designed & presented in relation to the FSC Standards.

**EDUCATION:      M.S. Forestry 1985              B.S. Forestry 1980**  
**University of Massachusetts; Amherst MA.**

**EXPERIENCE:**

**FSC/SFI/PEFC/Tree Farm Lead Auditor, Chain-of-Custody/Forest Management:** Scientific Certifications Systems (SCS) & NSF **June 2008 to Present.** (COC) Review company procedures; examine documentation and tracking of materials from the forest (or reclaimed material collection site) to the consumer; inspect company sites. (FM) Review management plans; examine & evaluate documents and management activities. Complete detailed reports that itemize evidence of conformance with applicable standard(s). Hundreds of COC reports and about a dozen FM reports authored to date.

**Instructor and Adjunct Faculty, Forest Botany (NRC 212):** Univ. of MA, Dept. of Natural Resources Conservation. **September to December 2008.** Instruct undergraduate classes in the field identification of > 200 native vascular plants, uncommon natural communities as well as non-native invasive plants.

**Upland Program Administration & Training:** MDFG, Div. of Fisheries & Wildlife (*MassWildlife*).

**May 2008 to May 2010.** Temporary, part-time assistance to the Upland Program with special emphasis in the following areas: complete biological surveys and ecological evaluations within Wildlife Management Areas located throughout Massachusetts as assigned; supervise active habitat enhancement projects & timber sales; train new staff in field procedures, assist with Forest Certification projects.

**Wildlife Biologist II:** MDFG, Div. of Fisheries & Wildlife (*MassWildlife*).

**May 1997 to April 2008.** As a member of the *MassWildlife* Bio-Diversity Team, under the supervision of the Division's Forest Project Leader, responsibilities included implementation of habitat management initiatives on state wildlife management areas. Basic expectations include

all aspects of planning, marking, marketing and administration of timber sale projects and other vegetation management projects, preparation of one ecological region assessment and site specific forest management plans, supervision of contracts and forest cutting plan operations; monitoring and control of non-native exotic, invasive plants. Actual assignment and accomplishment descriptions include:

- ✓ Co-author of landscape level (statewide, ecological region and management unit) planning processes for *MassWildlife* land. Co-author of the *MassWildlife* generic *Forest Management Guidelines for Wildlife Management Areas*.
- ✓ Draft author of the initial version of the Connecticut River Valley Ecoregion Assessment and Framework for EOE in co-ordination with DCR and DFW technical staff.
- ✓ Interact with researchers at the University of Massachusetts and the US Forest Service who conduct applied research on *MassWildlife* WMAs.
- ✓ Design and implement the forest habitat component of the *MassWildlife* Biological Diversity Initiative on 130,000 acres of state-owned wildlife management areas, including forest and non-forest (open-field) habitats. Foster maintenance of landscape level conservation of biodiversity through stimulation of policy and program development, continuing education presentations, and inter-agency cooperative projects. Design and implement *MassWildlife* land management and biological monitoring activities that achieve agency landscape composition goals while protecting the state's common and state-listed species and natural communities.
- ✓ Assist with the development of supporting documentation required for '**Green Certification**' application, a successful effort that secured independent, third party verification of sustainable management practices on *MassWildlife* land, including various current projects required to continuously meet Certification conditions.
- ✓ Complete resource inventory data collection and biological monitoring activities including but not limited to: design, train staff and implement vernal pool inventory, allowable harvest forest products inventory and associated Form 3 community data; and assess the accuracy of 120,000 acres of a vendor generated land cover map project.
- ✓ Evaluate and prioritize land parcels for potential acquisition as a member of the *MassWildlife* Land Acquisition Committee. Recommend acquisition on a fee-simple or conservation restriction basis. Review forest management guidelines that promote biodiversity conservation as a component of Conservation Restrictions acquired by *MassWildlife* on private land.
- ✓ Provide technical assistance, training and professional presentations to *MassWildlife* staff, private landowners, private non-profit conservation organizations, town conservation commissions and students with a special focus on plant identification, habitat identification and sustainable management for conservation of biodiversity. Develop and assist with continuing education opportunities that demonstrate the process, techniques and benefits of habitat enhancement projects.
- ✓ Prioritize, design, contract, and administer commercial harvest operations on state-owned wildlife management areas in order to enhance wildlife habitat diversity as a primary goal.
- ✓ Plan and conduct forest inventory on wildlife management areas. Supervise technicians and contractors who assist with inventory. As part of a team, designed and implemented

an improved remote sensing, spatially explicit GIS based inventory for *MassWildlife* land.

**Forester II - Service Forester: Massachusetts (DCR) Division of Forests & Parks. 1991 to May 1997.** The District included 16 rural towns which are best characterized as pre-dominantly (78%) forest cover over 289,000 acres and located in eastern Franklin County. Responsibilities included:

- ✓ Enforce the Massachusetts Forest Cutting Practices Act (MGL Chapter 132) through MOU with DEP and MGL Chapter 132. Audit, amend, permit and supervise 513 forest harvest operations exceeding 54.2 MMBF on 20,100 acres of public and private forest land (6 years).
- ✓ Audit, amend, permit and supervise approximately 300 current use (MGL Chapter 61) forest management plan applications on 15,000 acres of private forest land.
- ✓ Design and provide technical assistance to private landowners, private, non-profit conservation organizations, town conservation commissions, foresters, loggers and others interested in forest management programs, options and alternatives. Develop and assist with continuing education opportunities for foresters and loggers that demonstrate the harvesting process, best management practices, harvesting equipment and techniques, laws and regulations, vernal pool guidelines, plant identification and logger safety. Administer Massachusetts Timber Harvester License tests.

**Marketing and Utilization Forester: Massachusetts (DCR) Division of Forests & Parks. 1988 to May 1991.**

- ✓ Design and implement training workshops for forest industry professionals.
- ✓ Update & maintain Massachusetts Primary Producers Directory (list of sawmills, services and products). Assist with organization of Loggers Field Day. Implemented a sawmill survey, Co-authored and published a 30-year summary of sawmill status and trends in Massachusetts.
- ✓ Maintain database of Massachusetts Licensed Timber Harvesters.

**Forester I - Assistant Management Forester: Massachusetts (DCR) Division of Forests & Parks. December 1985 to 1988.**

- ✓ Under the supervision of a state lands forester in southern Berkshire County, design, mark, contract and administer commercial forest product sales on DCR forest land.

**OTHER RELATED EXPERIENCE:**

- ✓ Teaching: Vascular plant identification NRC 212 (University of Massachusetts);
- ✓ Research Assistant (Palenology) (University of Massachusetts);
- ✓ Gypsy Moth Research Assistant (University of Massachusetts);
- ✓ Environmental Education (**DEM**) Otter River, Lake Dennison, Mount Wachusett, Gardner Heritage and DAR State Parks.
- ✓ Forest Technician (USFS Kissachi National Forest, Pineville, LA);
- ✓ Wildfire Research: (Noatak National Wilderness Reserve, Alaska).

**PROFESSIONAL MEMBERSHIPS & ACTIVITIES:**

- 🌲 Member: Society of American Foresters (**SAF**) 1980 to 2007
- 🌲 Member: Williamsburg Conservation Commission 1987-88

- ✿ Massachusetts Representative: New England **SAF** Steering Committee 1988-93
- ✿ Secretary: **MWPA** Massachusetts Wood Producers Society 1988-1991
- ✿ Secretary-Treasurer: **NESAF** 1992-93
- ✿ Arrangements Chair: **NESAF** Winter Meeting 1992 & 1996
- ✿ Member: **SAF** National CFE Committee 1994-95
- ✿ Tour Coordinator: 1995 **SAF** National Meeting 1994-95
- ✿ Chair: Massachusetts Association of Professional Foresters (**MAPP**) 1996-98
- ✿ Member, Board Member, Committee Co-Chair: **Mount Grace Land Trust** 2003-2005
- ✿ Massachusetts Representative: **NESAF** Steering Committee 2005-07
- ✿ Massachusetts News Quarterly Correspondent: **NESAF** 2005-07
- ✿ Awards Chair: **NESAF** 2005-07
- ✿ Secretary: **NESAF** 2006-2007

#### **AWARDS:**

- ✿ 1988: Berkshire Pioneer **RC&D** Outstanding Achievement Award
- ✿ 1992: Massachusetts Governor's Pride in Performance Award
- ✿ 1992: Commonwealth Citation for Outstanding Performance
- ✿ 1992: Northeastern Loggers Association (**NELA**) Award for Outstanding Contributions to Forestry Education
- ✿ 1992: **NESAF** Mollie H. Beattie Leadership Award
- ✿ 1993: MA **DEM** CFM Forester of the Year Award
- ✿ 1995: **SAF** Yankee Division Outstanding Forester Award
- ✿ 2001: **NESAF** Austin Carey Practicing Professional Forester Award

#### **MISCELLANEOUS:**

- ❖ GPS (Garmin XL12; Garmin 60, 72 and 60 CSX): including upload & download
- ❖ Field PDA Computer (Dell PDA with 2 Dog Software)
- ❖ Computer: *Microsoft Word, Excel, e-mail, Power Point*
- ❖ Photography; digital camera
- ❖ Plant and natural community identification
- ❖ Technical writing and editing
- ❖ International Passport (2008-2018)

## Appendix II



# Maryland DNR Forest Service 2013 SFI Summary Surveillance 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.

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

### Maryland's State Forests

Maryland DNR Forest Service is responsible for the management of the 204, 947 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 22-25, 2013 by an audit team headed by Mike Ferrucci, 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.

Several of the SFI Objective 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:

- 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.

### **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 audit, a Re-certification Audit is scheduled for April, 2014.

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 Indicators reviewed in 2013. Recent non-conformances were closely reviewed and programs found to be generally quite effective. As such, the program has earned continued certification. There were no new non-conformances, and three "Opportunities for Improvement". The program has continued to exceed the standard in several areas. Details are provided below.

\*\*\*\*\*

The previously closed Major Non-conformance from the 2012 SFI Audit relating to criteria for soil protection was reviewed by the team and conformance was found. The organization has completed a review of the scientific literature and has implemented revised rutting policies consistent with the findings of this review.

The following Minor Non-conformance from the 2011 report, previously closed, was reviewed, and a related opportunity for improvement was issued.

From the 2012 Report:

*"Performance Measure 2.3 states 'Program Participants shall implement forest management practices to protect and maintain forest and soil productivity.'*

2011 Finding: "Some trails and permanent roads in the western forests have drainage provisions (crowns, road surfaces, cross drainage) which are not maintained adequately, resulting in erosion that is avoidable. ORV trails in particular are causing off-trail resource damage including sedimentation into pristine streams and damage to sensitive wetlands soils; much of this ORV-related damage involves unauthorized uses, but recent significant increased levels of trail use appear to be contributing to the problem."

The audit team had closed the 2011 Minor Non-conformance based on the permanent closure of ORV trails on two western and one eastern state forests and the availability of additional funding allocated to the Maryland DNR Forest Service for road maintenance and repairs. However delays in moving projects forward let the team to issue an OFI (see below).

### Opportunities for Improvement

Three opportunities for improvement (OFI) were identified in 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.

\*\*\*\*\*

## **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 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.  
(Indicator 1.1.3 requires “A forest inventory system and a method to calculate growth and yield.”)
- The program exceeds the requirements for protections of critically imperiled and imperiled species and communities, also known as Forests with Exceptional Conservation Values.  
(Indicator 4.1.3 requires “Program to locate and protect known sites associated with viable occurrences of critically imperiled and imperiled species and communities also known as Forests with Exceptional Conservation Value...”)
- Maryland DNR is a leader in the designation and protection of old-growth and potential old-growth forests.  
(Indicator 4.1.6 “Support of and participation in plans or programs for the conservation of old-growth forests in the region of ownership.”)
- 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 “Program Participants shall identify special sites and manage them in a manner appropriate for their unique features.”)
- Maryland DNR Forest Service has exceptional programs for public land planning including active advisory committees and accessible and up-to-date web sites.  
(Indicator 18.1.2: “Appropriate contact with local stakeholders over forest management issues through state, provincial, federal or independent collaboration.”)

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An SFI re-certification audit is required in 2014 (certificate expires August 15, 2014, with audits normally no more than 13 months apart). The next audit should be scheduled no later than mid-May, 2014.

## **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:**

Mike Ferrucci  
SFI Program Manager, NSF-ISR  
26 Commerce Drive  
North Branford, CT 06471  
203-887-9248  
[mferrucci@iforest.com](mailto:mferrucci@iforest.com)

**Appendix III**



**Audit Matrix**

## 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>
<b>1.1</b>	<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>								
<b>Notes</b>	Not reviewed during 2013 Surveillance Audit.  2012: 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.								

	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>
<b>1.1.1</b>	<b>Forest management planning at a level appropriate to the size and scale of the operation, including:</b> a. a long-term resources analysis; b. a periodic or ongoing forest inventory; c. a land classification system; d. soils inventory and maps, where available; e. access to growth-and-yield modeling capabilities; f. up-to-date maps or a geographic information system; 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).								

<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: Reviewed updates to the management plans for the two forests in the eastern region: Chesapeake Forest Lands 67,779 acres, July 1, 2007 Revision #5, February 14, 2012; Pocomoke State Forest 16,922 acres December 21, 2010 Revised 03.09.12.</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 State Forest 47,560 acres, February 16, 2012</li> <li>• Potomac-Garrett State Forest 17,931 acres, February 14, 2012</li> <li>• Savage River State Forest 54,325 acres, Final Draft Plan</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: there are five, three in draft versions to be finalized within the next few months</li> <li>• Annual Work Plans for each forest describe projects to be completed over the next 12 months.</li> <li>• The GIS contains layers with soils, topography, stands, wetlands, and other features.</li> <li>• For smaller or short-notice projects there is a “project review process</li> </ul>								
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.	MF	13						
<b>Notes</b>	<p>2013: descriptions of annual harvest trends in relation to the sustainable forest management plan are provided in the Annual Work Plans.</p> <p>2012: 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.	MF		13					
<b>Notes</b>	<p>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.</p> <p>Inventory is emerging as a strength of this program. The SILVAH system is being used to systematically inventory and develop stand-level prescriptions for the three western forests. The depth of this effort is commendable.</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>
<i>1.1.4</i>	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.).	MF	13						
<i>Notes</i>	2013: 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>
<i>1.1.5</i>	Documentation of forest practices (e.g., planting, fertilization, and thinning) consistent with assumptions in harvest plans.	MF	13						
<i>Notes</i>	<p>The Maryland DNR Forest Service maintains a very accurate database of planned and completed activities.</p> <p>Annual Work Plans (AWP) 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.</p>								

**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>	MF	13						
<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 (termed FIA). 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.	MF	13						
<i>Notes</i>	East: this designation is found in the AWP's; 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.	MF	13						
<i>Notes</i>	2013: No regeneration delays were observed. Some overstory removal harvests observed had significant logging-related impact to desirable oak regeneration, but the scientific and experience-based consensus is that the seedlings will re-sprout from the roots and result in better-formed seedlings. 2012: Regeneration surveys are conducted following regeneration treatments (within one or two years for loblolly on the CSF; after 3-5 years for hardwood stands in the west). When regeneration is not sufficient planting or other measures are employed.								

	<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>
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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.	MF	13						
<b>Notes</b>	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.	MF	13						
<b>Notes</b>	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.	MF	13						
<b>Notes</b>	Field observations confirm that advanced natural regeneration is protected during harvest, except as noted above for vigorous sprouting species, where seedling-sprouts are considered superior to advance-regeneration seedlings.								

	<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.								
<b>Notes</b>	Not reviewed during 2013 Surveillance Audit. 2012: Planting is not commonly done. 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>
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2.1.7	Afforestation programs that consider potential ecological impacts of the selection and planting of tree species in non-forested landscapes.		NA						
<b>Notes</b>	No afforestation is being conducted.								

	<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>	MF	13						
<b>Notes</b>	See indicators below. 2012: Not reviewed during 2012 Surveillance 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>
2.2.1	Minimized chemical use required to achieve management objectives.	MF	13						
<b>Notes</b>	A review of table of chemical treatments from previous 12 months showed that half were for control of invasive exotic species which can't generally be effectively controlled without chemicals. Restoration (driven by ecological / biodiversity conservation goals) involved less than 10%, and the remainder (about 40%) were for regeneration treatments. Overall use was less than 0.1% (about 150 acres on land base of over 210,000 acres). 2012: Not reviewed during 2012 Surveillance 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>
2.2.2	Use of least-toxic and narrowest-spectrum pesticides necessary to achieve management objectives.	MF	13						
<b>Notes</b>	The most common chemical used was Glyphosate, a chemical with a short life span considered quite safe. Other chemicals used included sulfometuron (Oust; low toxicity, short activity), imazapyr (Arsenal, Polaris), and trichlopyr (used to control broadleaf weeds while leaving grasses and conifers unaffected). Imazapyr is broad-spectrum, but was used only for cut-stump treatments. 2012: Not reviewed during 2012 Surveillance 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>
2.2.3	Use of pesticides registered for the intended use and applied in accordance with label requirements.	MF	13						
<b>Notes</b>	Confirmed through interviews and review of documents, such as “Invasive Species Tracking Form” for application of Glyphosate on 07.01.12. Chesapeake Forest Manager Mike Schofield was the licensed individual and Lance Carroll was the applicator (also trained).								

	<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.	MF	13						
<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.	MF	13						
<b>Notes</b>	Interviews confirmed Supervision of forest chemical applications by state- certified applicators. Review of “Invasive Species Tracking Form” for application of Glyphosate on 07.01.12: Chesapeake Forest Manager Mike Schofield was the licensed individual and Lance Carroll was the applicator (also trained).								

	<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>	MF	13						
<i>Notes</i>	Interviews confirmed. 2012: Not reviewed during 2012 Surveillance 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	<b>Program Participants shall implement forest management practices to protect and maintain forest and soil productivity.</b>	MF	13						

<b>Notes</b>	<p>2013: See indicator 2.37 below.</p> <p>2012: Closed 2011 Minor CAR. Roads remain a concern, were not thoroughly reviewed during the 2012 audit, and thus will be the primary focus area of the 2013 audit (progress in reducing the road maintenance backlog will be assessed). Up to \$2 million in special (one-time) funding may be allocated to the Maryland DNR Forest Service for road maintenance over the next two years.</p> <p>Plans are in place and funding has been identified to address the backlog of road/trail maintenance needs, for example:</p> <ul style="list-style-type: none"> <li>• \$300,000-\$450,000 funding is anticipated for planning/design and some initial work in FY13 (July 1 2012- June 30 2013); then another \$1.7 million for FY14.</li> <li>• A “Road Maintenance Policy” has been adopted (Forest Roads Management for Forest Operations on Maryland State Forests, Jan. 2012). This policy states clear standards for road classification, maintenance, and evaluation/monitoring, aka “road inventory”.</li> <li>• The agency has completed its inventory on about half of its roads, and expects to complete entire inventory by fall of 2012. The team auditor confirmed the road inventory in the Savage River State Forest. Managers are starting to use the inventory to set priorities. For example the MFS is working towards the first year’s batch of requests approvals from Maryland Department of the Environment for culvert replacements, working from the inventory information currently available.</li> <li>• In 2011 extensive environmental impacts associated with recreational use of forest roads were observed on the Burkholder Road ATV Trail (Potomac Garrett State Forest), the Poplar Lick Trail (Savage River State Forest), and the East Valley ORV Trail (Green Ridge State Forest). These problematic ORV trails have been closed. The Chandler Tract ORV trail on Pocomoke State Forest was subject of a finding in 2009, was temporarily closed, and now has officially been closed to ORV use and is only now to be used as a trail for hiking. Seasonal Maryland DNR Forest Service staff worked to restore and repair the trail which has now mostly seeded in with grasses. Sites continue to be evaluated for possible ORV opportunities for replacement; model in place to assess all DNR lands</li> </ul> <p>Also see indicators.</p>
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	<b>2010-2014 Requirement</b>	Audit -or	<b>C</b>	<b>EXR</b>	<b>Maj</b>	<b>Min</b>	<b>OFI</b>	<b>Likely Gap *</b>	<b>Likely Conf. *</b>
2.3.1	Use of soils maps where available.	MF	13						
<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	<b>C</b>	<b>EXR</b>	<b>Maj</b>	<b>Min</b>	<b>OFI</b>	<b>Likely Gap *</b>	<b>Likely Conf. *</b>
2.3.2	Process to identify soils vulnerable to compaction, and use of appropriate methods to avoid excessive soil disturbance.	MF, AMK	13						

<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.								
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	<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.	MF, AMK	13						
<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 2013 field audits of 2012-2013 harvest sites.								

	<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).	MF, AMK	13						
<b>Notes</b>	Post-harvest conditions on all current harvest sites observed in 2012 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.	MF, AMK	13				13		
<b>Notes</b>	<p><b>There is an opportunity to improve the implementation of sound silviculture.</b></p> <p>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.</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>
2.3.6	Criteria that address harvesting and site preparation to protect soil productivity.	MF, AMK	13						

<i>Notes</i>	The 2012: Major Non-conformance, previously closed, was reviewed and continuing conformance was demonstrated. Maryland DNR Forest Service has developed criteria defining acceptable levels of rutting during harvests, and no longer excludes any rut that is not associated with erosion and sedimentation.
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	<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.	MF, AMK	13				13		

<i>Notes</i>	<p><b>There is an opportunity to improve the implementation of the road maintenance and reconstruction program.</b></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> <p>2012: Roads are generally constructed and skid roads and trails designed to minimize impacts. Past issues with the maintenance of permanent roads to ensure that drainage structures are maintained so as to function properly are expected to be addressed with increased funding for planning and implementation of infrastructure maintenance and upgrades.</p>								
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	<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>	MF	12						

<i>Notes</i>	See indicators below.								
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	<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>
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2.4.1	Program to protect forests from damaging agents.	MF	13						
<b>Notes</b>	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.	MF, AMK	13				13		
<b>Notes</b>	<p><b>There is an opportunity to improve in the western region regarding forest health and the treatment of overstocked stands.</b></p> <p>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.</p> <p>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.</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>
2.4.3	Participation in, and support of, fire and pest prevention and control programs.								
<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: Maryland Forest Service is the lead forest agency; many state forest workers are trained as wild fire fighters.</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>
2.5	<b>Program Participants that deploy improved planting stock, including varietal seedlings, shall use sound scientific methods.</b>								
<b>Notes</b>	Not reviewed during 2013 Surveillance 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>
2.5.1	Program for appropriate research, testing, evaluation and deployment of improved planting stock, including varietal seedlings.								
	Not reviewed during 2013 Surveillance Audit.								

**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>	MF	13						
<i>Notes</i>	See indicators below. Laws and BMPs are respected.								

	<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.	MF, AMK	13						
<i>Notes</i>	<p>2013: Issues that are covered by Maryland BMPs are addressed in harvest planning, operations, and post-harvest reviews. BMPs are met, except those related to road maintenance which are addressed in SFI Indicator 2.3.7 where there is an opportunity to improve.</p> <p>2012: The eastern forests have a comprehensive program for implementing BMPs in all phases of management activities. The western forests are steep and are subject to extensive recreational use of roads and trails, with some locations having quite intensive use by ORVs and by AWD vehicles as well as by motorcycles. Foresters and managers in the west are hampered by lack of road budgets or provisions for routine maintenance.</p> <p>Road maintenance issues are not included in the Maryland BMPs.</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>
3.1.2	Contract provisions that specify conformance to best management practices.	MF	13						
<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>
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3.1.3	Plans that address wet-weather events (e.g. forest inventory systems, wet-weather tracts, definitions of acceptable operating conditions).	MF	13						
<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. The rutting criteria have been clarified.								

	<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.	MF	13						
<i>Notes</i>	2013: 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>	MF	13						
<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.	MF	13						
<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 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>
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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.	MF	13						
<b>Notes</b>	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.	MF, AMK	13						
<b>Notes</b>	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.								
<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: 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: Confirmed the awareness of the importance of vernal pools by field 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>
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.	MF	13						
<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	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<b>4.1</b>	<b>Program Participants shall have programs to promote biological diversity at stand- and landscape-levels.</b>	MF, AMK	13						
<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>4.1.1</b>	Program to promote the conservation of native biological diversity, including species, wildlife habitats and ecological community types.	MF, AMK	13						
<b>Notes</b>	<p>All five forests are managed to conserve and protect biodiversity, which is one of the foremost objectives in the ten year management plans, as well as a clear driver of many planning and operational procedures.</p> <p>The core element of the biodiversity conservation program is the use of an Interdisciplinary Team (IDT) process for review and approval of plans (forest-wide and project level). The IDT includes land managers and a wide range of specialists. Working relationships among the key participants on the IDTs appear to be quite effective and continue to improve.</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>
<b>4.1.2</b>	Program to protect threatened and endangered species.	MF, AMK	13						
<b>Notes</b>	<p>Rare, threatened, and endangered species are recorded in the heritage database. Heritage biologists are involved in planning for all harvests, treatments, or land-altering activities. Monitoring is done following treatments which could affect RTE species or their habitats, which special efforts following “restoration” treatments.</p> <p>The Ginseng issue was addressed by eliminating the harvest of this rare plant from state forests.</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 also known as Forests with Exceptional Conservation Value. Plans for protection may be developed independently or collaboratively, and may include Program Participant management, cooperation with other stakeholders, or use of easements, conservation land sales, exchanges, or other conservation strategies.	MF, AMK		13					
<i>Notes</i>	<p><b>The program exceeds the requirements for protections of critically imperiled and imperiled species and communities, also known as Forests with Exceptional Conservation Values.</b></p> <p>FECVs are generally covered within the broader HCVF approach. For example Delmarva Fox Squirrels are favored in the eastern forest by protections built into HCVF zones where DFS management is the driver. The western forests had no 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 best scientific information, to retain stand-level wildlife habitat elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees.	MF	13						
<i>Notes</i>	<p>On the eastern forests retention associated with clearcuts, and on the western forests retention in variable retention harvests were consistent with the policy and were clearly being implemented thoughtfully. Foresters carefully design retention based on biological needs tempered by operational considerations. The results include dispersed and clumped green tree retention, protection of snags and den trees, and careful layout, flagging, mapping and harvest supervision.</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>
4.1.5	Program for assessment, conducted either individually or collaboratively, of forest cover types, age or size classes, and habitats at the individual ownership level and, where credible data are available, across the landscape, and take into account findings in planning and management activities.	MF	13						

<b>Notes</b>	Maryland’s Forest Service works closely with ID Teams, Advisory Committees and other Maryland Forest Service personnel who work on private forest lands. This helps develop an understanding of state forest land resources compared to those of private lands. For example, old growth forests are largely found on state lands rather than private lands, wilderness (Wildlands) is designated solely on state lands. In the eastern region the close relationships with TNC have also helped ensure landscape scale consideration and some cross-border management cooperation as well. Considerable progress has been made using the “LANDFIRE” program to develop a reliable database that provides estimates of the acres of existing vegetation types across this ownership and other state lands in the eastern and western regions. This analysis is helping identify possible “gaps” in the network of protected vegetation types (aka “Representative Sample Areas” under FSC terminology).
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	<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.	MF, AMK		13					
<b>Notes</b>	<p><b>Maryland DNR is a leader in the designation and protection of old-growth and potential old-growth forests.</b></p> <p>Old Growth Ecosystem Management Areas (OGEMAs) and Potential Old Growth Management Area (POGMA) designations are extensive for the western forests, and other land prioritizations in the eastern forests supplement old growth management designations.</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>
4.1.7	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.	MF, AMK	13						
<b>Notes</b>	<p>Interviewed Anne Hairston-Strang and other personnel. Have completed a study based on MBSS data from statewide inventories of riparian zones, and reviewed forest regeneration as impacted by invasive plants. “Grant Narrative for FY2011 NA S&amp;PF Competitive Allocation Request for Proposals, MD DNR Forest Service, FY 2011” was funded, and efforts to implement include site-level treatments.</p> <p>Much of the pesticide use in the past 12 months reported was for control of aggressive invasive plants.</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>
4.1.8	Program to incorporate the role of prescribed or natural fire where appropriate.								

<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: DNR Prescribed Fire Op Order, interviews, and other documentation confirmed that there is an operating program for the use of fire, although most specialists and managers would like to use the tool even more frequently.</p> <p>Example: Nazereth Church Tract 6, Stand 8, PSF – Prescribed Burn Plan # 2012-4016 in an area with combinations of G3 community (sand ridge), ESA Zone 1 and DFS Future Core. Completed understory burn 3-30-12, which proceeded according to the burn plan so that the written burn objectives were met. Goal was to remove 2-3 inches of a much thicker litter layer to promote natural regeneration of pond pine so that the stand can be regenerated. (See site notes at the end of the checklists for more information.)</p>
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	<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>4.2</b>	<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>	MF, AMK	13						
<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>4.2.1</b>	Collection of information on Forests with Exceptional Conservation Value and other biodiversity-related data through forest inventory processes, mapping or participation in external programs, such as NatureServe, state or provincial heritage programs, or other credible systems. Such participation may include providing non-proprietary scientific information, time and assistance by staff, or in-kind or direct financial support.	MF	13						

<b>Notes</b>	<p>2013: While not a focus of the 2013 audits the biodiversity-focused efforts described below continue, based on discussions and documentation.</p> <p>2012: Maryland Natural Heritage Program maintains a well-populated database of RT&amp;E species. Foresters and specialists seek special sites of all types, 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 draft management plan includes prescriptions for monitoring sites and restrictions on 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 draft 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. 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> <p>DNR Foresters in the East have a designated form to report observations of RT&amp;E species to Maryland Heritage. Intensive SILVAH inventory will cover all forests- even those that have been reserved from active timber management as ESA's or HCVF's. As described in the Potomac Garrett State Forest, Savage River State Forest, and Green Ridge State Forest, sample points for sensitive resources will be selected using random sampling or, when necessary, stratified random sampling. Cluster sampling may be used for rare plants. This monitoring may be ongoing or of limited duration.</p>
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	<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.	MF	13						
<b>Notes</b>	<p>2013: IDT members participated in audits and confirmed strong emphasis on biodiversity protection in the context of active forest management. Botanists and ecologists review all proposed harvests and provide input on those which may impact biodiversity or RTE species or special sites. Their input is sought and respected by forest managers.</p> <p>2012: Maryland Forest Service Policy &amp; Procedure Manuals and all five management plans refer to the process of extensive review of all projects by the IDTs. These teams comprise the primary means of ensuring that current scientific knowledge is incorporated into treatments.</p> <p>Timber Operation Order Operation Order 2011-601 describes the composition of the IDTs:</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 audit (forest ecologist, botanist, fisheries biologist) demonstrated command of the scientific knowledge required to protect and manage biodiversity. Over time the monitoring described under the preceding indicator will help add to the practical knowledge base.</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>	MF, AMK	13						
<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.	MF, AMK	13						
<i>Notes</i>	<p>2013: While not a focus of the 2013 audits the visual management efforts described below continue, based on interviews and observations.</p> <p>2012: 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>								

	<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.	MF, AMK	13						
<i>Notes</i>	<p>Confirmed by field observations.</p> <p>2012: Planning for all harvests includes careful consideration of aesthetics. Variable retention technique considers aesthetics when deciding on location of clumped retention. Green tree retention in clearcut harvests can help with visual management, and is expected to be more commonly used as the new policy is implemented. Many field sites reviewed in 2012 had visual buffers and other provisions to manage visual impacts.</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>

5.2	<b>Program Participants shall manage the size, shape and placement of clearcut harvests.</b>	MF	13						
<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.	MF	13						
<i>Notes</i>	2013: The average size of clearcuts reported to SFI for 2012 was 36 acres. The average size of clearcuts reported to SFI for 2011 was 25 acres.								

	<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.	MF	13						
<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>	MF	13						
<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.	MF	13						
<i>Notes</i>	Field observations confirmed that adjacency and green-up requirements are met. There were no large clearcuts observed over 30 acres, and these were buffered by uncut stands or included significant retention. 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.	MF	13						
<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.	MF	13						
<i>Notes</i>	No violations of this indicator were observed during the 2013 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>
5.4	<b>Program Participants shall support and promote recreational opportunities for the public.</b>	MF		13					
<i>Notes</i>	<b>An exceptional range of high-quality recreational opportunities are provided on the Maryland State Forests.</b> See 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>
5.4.1	Provide recreational opportunities for the public, where consistent with forest management objectives.	MF		13					
<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>
<b>6.1</b>	<b>Program Participants shall identify special sites and manage them in a manner appropriate for their unique features.</b>	MF		13					
<b>Notes</b>	<p><b>The program for the identification and protection of special sites is exemplary.</b></p> <p>The High Conservation Value Forest (HCVF) is the primary designation for conserving special sites. HCVF includes: Ecologically Significant Areas, old growth, wetlands of special state concern. Significant percentages of each state forest have been designated as HCVF including Potomac Garrett State Forest = 44%; SRSF= 32%; Green Ridge State Forest 39%. Also see indicators.</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>
<b>6.1.1</b>	Use of information such as existing natural heritage data, expert advice or stakeholder consultation in identifying or selecting special sites for protection.	MF		13					
<b>Notes</b>	<p><b>The program for the identification and protection of special sites is exemplary.</b></p> <p>Information on special sites is primary from internal (MDNR) sources. Heritage data and information from specialists outside of the department supplement this information. The Maryland Forest Service has demonstrated exceptional efforts to identify special sites and to select special areas (representative sample areas or RSAs for example) for protection and for management and/or restoration as needed. Within the Green Ridge State Forest management plan, critical habitats have been mapped 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.</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>
<b>6.1.2</b>	Appropriate mapping, cataloging and management of identified special sites.	MF		13					
<b>Notes</b>	<p>The GIS contains point or shape files (layers with information on) showing ecologically important communities and/or ecological features. The programs continue to emphasize regular additions to the inventory of historic sites (i.e. cemeteries, old home sites, Native American Indian sites) using GPS and GIS technology. Historic cemeteries on Green Ridge State Forest are mapped, identified with signs, and many are fenced and maintained by state forest maintenance staff.</p>								

**Objective 7. Efficient Use of Forest Resources.**

To promote the efficient use of forest resources.

	<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>
7.1	<b>Program Participants shall employ appropriate forest harvesting technology and in-woods manufacturing processes and practices to minimize waste and ensure efficient utilization of harvested trees, where consistent with other SFI Standard objectives.</b>	MF	13						
<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>
7.1.1	Program or monitoring system to ensure efficient utilization, which may include provisions to ensure: <ul style="list-style-type: none"> <li>a. management of harvest residue (e.g. slash, limbs, tops) considers economic, social and environmental factors (e.g. organic and nutrient value to future forests) and other utilization needs;</li> <li>b. training or incentives to encourage loggers to enhance utilization;</li> <li>c. cooperation with mill managers for better utilization of species and low-grade material;</li> <li>d. exploration of markets for underutilized species and low-grade wood and alternative markets (e.g. bioenergy markets); or</li> <li>e. periodic inspections and reports noting utilization and product separation.</li> </ul>	MF	13						
<i>Notes</i>	<p>Timber Operation Order Operation Order 2011-601 specifies timber sale procedures. Foresters involved in sale supervision have considerable experience with forest harvesting, merchandizing, and utilization. Markets have been challenging, with many mills struggling for survival and unable to make use of smaller diameter material.</p> <p>Field observations confirm that harvests in all forests have a reasonable to very good degree of utilization. Difficult markets cause some sales to have considerable logging slash, but this material does not hamper soil productivity.</p> <p>All loggers are trained. Foresters monitor all timber harvests; utilization was included on the inspection forms.</p>								

**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>
<i>14.1</i>	<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>	MF	13						
<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>14.1.1</i>	Access to relevant laws and regulations in appropriate locations.	MF	13						
<i>Notes</i>	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>
<i>14.1.2</i>	System to achieve compliance with applicable federal, provincial, state or local laws and regulations.	MF	13						
<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.	MF	13						

<b>Notes</b>	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.
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	<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>14.2</b>	<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>	MF	13						
<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>14.2.1</b>	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.	MF	13						
<b>Notes</b>	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	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<b>14.2.2</b>	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.	MF	13						
<b>Notes</b>	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	<u>C</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	<u>OFI</u>	<u>Likely Gap *</u>	<u>Likely Conf. *</u>
<i>15.1</i>	<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>	MF	13						
<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>15.1.1</i>	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: a. forest health, productivity, and ecosystem functions; b. chemical efficiency, use rate and integrated pest management; 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; d. wildlife management at stand- and landscape-levels; e. conservation of biological diversity; f. ecological impacts of bioenergy feedstock removals on productivity, wildlife habitat, water quality and other ecosystem functions; g. climate change research for both adaptation and mitigation; h. social issues; i. forest operations efficiencies and economics; j. energy efficiency; k. life cycle assessment; l. avoidance of illegal logging; and m. avoidance of controversial sources.	MF	13						
<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 and/or through cooperative efforts involving SFI Implementation Committees, associations or other partners develop or use state, provincial or regional analyses in support of their sustainable forestry programs.</b>	MF	13						
<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.	MF	13						
<i>Notes</i>	No additional information since 2011 audit, from Jack Purdue: “MD DNR Forest Service assists the USDA Forest Service Forest Inventory & Analysis (FIA) in periodic forest product drain analysis, private forest landowner surveys, data/findings review and program steering committees. MD DNR Forest Service assisted the MD Dept of the Environment in establishing best management practices specific to forest harvest practices for water quality protection. MD DNR Forest Service staff is involved with the Chesapeake Bay Program, NRCS technical advisory committee, NRCS tree planting programs, Conservation Reserve Enhancement Program (CREP) and soil survey tools development.”								

	<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>
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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>	MF	13						
<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.	MF	13						
<i>Notes</i>	Monitoring is done by 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.								
<i>Notes</i>	Not reviewed during 2013 Surveillance Audit.								

**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>
<i>16.1</i>	<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>								
<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>
<i>16.1.1</i>	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.								
<i>Notes</i>	Not reviewed during 2013 Surveillance Audit. 2012: 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>
<i>16.1.2</i>	Assignment and understanding of roles and responsibilities for achieving SFI 2010-2014 Standard objectives.	MF	13						
<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>
<i>16.1.3</i>	Staff education and training sufficient to their roles and responsibilities.	MF, AMK	13						
<i>Notes</i>	Interviews confirmed strong understanding of range of topics associated with job duties. Reviewed training record for one Limited Term Employee.								

	<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>
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16.1.4	Contractor education and training sufficient to their roles and responsibilities.	MF, AMK	13						
<b>Notes</b>	Loggers have Maryland Master Logger credential or equivalent (see next indicator). Training records for the largest contractor, Parker Forestry, indicated ongoing training consistent with responsibilities.								

	<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.	MF	13						
<b>Notes</b>	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>	MF	13						
<b>Notes</b>	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>	MF	13						
<i>Notes</i>	<p>Steve Koehn is an SFI Board Member, in the category “representing the social sector, which includes community or social interest groups such as universities, labor, family forest owners or government agencies”.</p> <p>Maryland Forest Service has provides considerable support for logger training programs.</p> <p>2012: Steve Koehn is the state’s representative on the SIC. Skip Jones has provided support in the past for logging training by speaking on erosion and sedimentation control. Master Logger training during this recent year included a session on certification presented by Jack Perdue</p>								

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>
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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>	N.A.							
<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>
<i>17.1</i>	<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>								
<i>Notes</i>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: Maryland Forest Service has provided critical support for the American Tree Farm System, notably helping to revitalize the program in 2009-2010. See indicators below for additional activities.</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>
<i>17.1.1</i>	Support, including financial, for efforts of SFI Implementation Committees.								
<i>Notes</i>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: 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.</p> <p>"Steve [Koehn] is an active member of the SIC Committee. He began, simply as an interested party, Maryland State Forester, and one of our funders. He now is an integral part of the committee as funding support, but, also as a stakeholder since the State Forest lands have become certified." provided by Peter H. Miller, CF, Administration Supervisor, Luke Wood Department, Westernport, MD 21562</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>
<i>17.1.2</i>	Support for the development of educational materials for use with forest landowners (e.g. information packets, websites, newsletters, workshops, tours, etc.).								

<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: In 2012, Maryland DNR provided the Master Logger course on forest certification, stream crossings, and skidding. They are also working on a trucking course which will include record keeping, taxes, weight limits, etc. Maryland DNR foresters provided significant support and spoke at two major Society of American Foresters meetings in the past year.</p> <p>The following occurred in 2011 but were not listed in 2011 report:</p> <ul style="list-style-type: none"> <li>• Pest and Pathogen update with a focus on emerald ash borer</li> <li>• Logging Hazard Awareness course taught by Wayne Lundstrom (WVU OSHA 3 Training Center)</li> <li>• Logging Fire Safety and Prevention (2 hour classroom lecture and 20 minutes tailgate talk)</li> <li>• Salvage Logging Safety talk</li> <li>• a new CE update course available in correspondence format on DVD or streaming online that includes the fire talk, salvage logging safety, and the pest/pathogen (EAB) update</li> <li>• Forest Pest and Pathogen Field ID Cards for distribution to Master Loggers and private forest landowners</li> <li>• We also offered a welding course for loggers, but had to cancel it due to low registration</li> </ul>
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	<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>17.1.3</i>	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.								
<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: Maryland DNR’s broad conservation mandate, University of Maryland Coop Extension, SAF support and involvement all relate to this requirement. Materials available at the Annapolis DNR Forest Service office and on-line were confirmed.</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>
<i>17.1.4</i>	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.								
<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: 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> . Interviews with top management confirmed that this program is well-funded and contributes to forest conservation.</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>
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.	MF	2013						
<b>Notes</b>	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>								
<b>Notes</b>	Not reviewed during 2013 Surveillance 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>
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.								

<b>Notes</b>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: <b>Eastern Region:</b></p> <p>CSF/PSF: Allegheny College, SAF-recognized forest technician program will visit, and Mike Schofield will spend a day with the group, May 10, 2012, to discuss forest management and forest certification.</p> <p>Winter 2012 Allegheny SAF Meeting presented on Sustainable Forest Management.</p> <p>Kip Powers organized the 2011 Allegheny SAF Meeting and included forest certification as a topic.</p> <p><b>Responses from Western Region supervisors that occurred during this past year:</b></p> <p>1) Seminar: Annual pest update workshops co-sponsored with Dept. of Ag.; audience includes consulting foresters, USFS, rangers, Forest Conservancy District Boards and Citizens Advisory Committee.</p> <p>2) Annual MOU/Partnership with 2 local community colleges. State Forests used as outdoor lab for wildland firefighting course and chainsaw course including staff participation.</p> <p>3) Seminar: Master Logger training during this recent year included a session on certification presented by Jack Perdue.</p> <p>4) Seminar: Annapolis Lunch presentations - included a presentation by Jack Perdue on forest certification</p> <p>5) Field Tour: College tours X 2 for Hood and Frostburg students</p> <p>6) Field Tour: for @ 25 international travelers in response to a request</p>
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	<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>17.3</i>	<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>								
<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>
<i>17.3.1</i>	Support for SFI Implementation Committees (e.g. toll free numbers and other efforts) to address concerns about apparent nonconforming practices.								
<i>Notes</i>	Not reviewed during 2013 Surveillance 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>
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.								
<i>Notes</i>	Not reviewed during 2013 Surveillance Audit.								

**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>	MF	13						
<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.	MF	13						
<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 (CFP 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.	MF		13					
<i>Notes</i>	<p><b>Maryland DNR Forest Service has exceptional programs for public land planning including active advisory committees and accessible and up-to-date web sites.</b></p> <p>Public can comment through the Annual Work Plan Review meetings, Citizens Advisory Committee meetings, and the management plan review. See detailed description in previous indicator. The Fiscal Year 2012 AWP for the Eastern Region State Forest Lands (Chesapeake Forest and PSF) includes public comments.</p> <p>Examples of press releases and newspaper articles describing public input opportunities were reviewed. A comment on the Potomac/Garrett State Forest 2013 Annual Work Plan was reviewed as well.</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>

18.2	<b>Program Participants with forest management responsibilities on public lands shall confer with affected indigenous peoples.</b>								
<i>Notes</i>	Not reviewed during 2013 Surveillance 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>
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.								
<i>Notes</i>	<p>Not reviewed during 2013 Surveillance Audit.</p> <p>2012: CSF/PSF: Mike Schofield, CFP Manager, DNR Forest Service at request of various tribes who were interested in potential burial sites for Indian remains has shown them some potential areas and has passed the issue on to DNR and Maryland Historic Trust (MHT). MHT has developed criteria for appropriate sites.</p> <p>November 2012 meeting of the Citizens Advisory Committee to review 2013 work plan included involvement by Chief Rudy Hall, who has confirmed credentials. Chief Hall played an active role in the meeting.</p> <p>Managers met with Maryland Commission on Indian Affairs (Mar 7, 2011). Members have been extended an invitation to serve on local Citizens Advisory Boards and some of accepted that invitation.</p>								

**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>	MF	13						
<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, <ul style="list-style-type: none"> <li>a. a description of the audit process, <i>objectives</i> and scope;</li> <li>b. a description of substitute <i>indicators</i>, if any, used in the audit and a rationale for each;</li> <li>c. the name of <i>Program Participant</i> that was audited, including its SFI representative;</li> <li>d. a general description of the <i>Program Participant</i>'s forestland and manufacturing operations included in the audit;</li> <li>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>);</li> <li>f. the dates the certification was conducted and completed;</li> <li>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</li> <li>h. the certification decision.</li> </ul>	MF	13						
<b>Notes</b>	NSF has prepared the summary report to include all of the above items.								

	<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>	MF	13						
<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.	MF	13						

<b>Notes</b>	Confirmed with SFI, Inc. 2012 report provided nearly on time and is complete (Rachel Dierolf, SFI Inc. email).
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	<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.	MF	13						
<b>Notes</b>	Managers maintain comprehensive and detailed records that cover all aspects of the program needed to complete the annual progress reports (and far more within database and files). Lead Auditor reviewed the interim reports from the various state forest managers which are then compiled into the single, system-wide report.								

	<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.	MF	13						
<b>Notes</b>	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>
<i>20.1</i>	<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>	MF	13						
<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>
<i>20.1.1</i>	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.	MF	13						
<i>Notes</i>	<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). Discussed ISA (Internal Silvicultural Audits) procedure which includes “Forest Practice Review” form.</p> <p>The internal audits were led by Jack Perdue, using the post-activity checklist to review 3-4 sites at each forest; 13 total harvests were reviewed:  Green Ridge State Forest: April 1 &gt;&gt; 3 sites visited  Savage River State Forest: April 2 &gt;&gt; 3 sites visited  Potomac Garrett State Forest: April 3 &gt;&gt; 3 sites visited  Chesapeake Forest / Pocomoke State Forest: April 11 &gt;&gt; 4 sites visited</p> <p>The internal audit team included the foresters involved in the program (state and contract foresters).</p> <p>State forest managers report to regional managers, and provide information formally (CF State Forest Management Plan, Appendix I “Policy for SFI Management Review and Continual Improvement” specifies “biannual reports will be filed by the State Forest manager”) and informally.</p> <p>Process appears to be robust and useful.</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>
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20.1.2	System for collecting, reviewing, and reporting information to management regarding progress in achieving SFI 2010-2014 Standard objectives and performance measures.	MF	13						
<b>Notes</b>	<p>An effort was made to integrate management review with the ID Team process, but was not achieving the objectives so the same process as in 2012 was used. Jack Perdue, State Lands Manager audited randomly-selected sites in each of the Maryland State Forests. These reviews occurred during March and April, 2013. Reviews were documented using Internal Silvicultural Audits procedure which includes “Forest Practice Review” form. There were no findings requiring corrective action.</p> <p>2012: Activity Summary By Annual Work Plan” demonstrates clear and steady progress by comparing “the work scheduled in each annual work plan against the amount of work implemented/completed in the field.”</p> <p>New ISA (Internal Silvicultural Audits) procedure which includes “Forest Practice Review” form is operating in both the Western and Eastern Regions. Internal audits on March 29-30 in the west and on April 3, 2012 at the CSF/PSF were led by Jack Perdue, using the post-activity checklist to review 2-3 sites for each forest. The Eastern internal audit team included Mike Schofield, Alex Clark, Kip Powers, Skip Jones, Stacey Esham, and John Connors (last three with Parker Forestry). The western internal audits involved: Wade Dorsey (SRSF), Mark Beals and Jesse Morgan (GRSF) and Noah Rawe (PGSF). Regional Forester Bob Webster was also part of each of the western ISA exams.</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>
20.1.3	Annual review of progress by management and determination of changes and improvements necessary to continually improve conformance to the SFI 2010-2014 Standard.	MF	13						
<b>Notes</b>	<p>Printed copy of “Forest Management Certification Review, December 12, 2012” showed that a review was conducted that included forest managers, the key consultant, and supervisory personnel. The focus of the management review was on findings from past external (third-party) audits, with concise summary of the 2012 corrective action requests. The internal audit review is covered under the section titled “SFI and FSC standards review” which included 13 items related to state forest activities and management systems.</p> <p>2012: An annual management review was conducted on December 12, 2011 and the report was reviewed. The review included the senior management team (Annapolis-based), the regional foresters, forest managers for the involved state foresters, and the chief forester from the contract forest consulting firm. The review included topics from the 2012 third-party audit findings, changes in plans and policies, and a statement from Steven W. Koehn, Director / State Forester, Maryland DNR Forest Service regarding his overall goals for the state forests: 1-Roads Inventory and Maintenance; 2 – Improved Forest Stocking; 3- Improved Trails System. These priorities are clearly playing out in field operations to some degree, with much work to be done. The annual review process meets the requirements and appears to be well integrated into the program.</p>								

**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 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.

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; program recently expanded.

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 V



# Sites and Audit Participants

## 2013 Background and changes

Annapolis Office Discussion:

1. Changes to Rutting Policy
2. Working on reorganization
3. Considered some changes to the internal audit process, but used previous approach

## 2013 Audit Participants

### Tuesday April 23, 2013, Potomac-Garrett State Forest

Anne Marie Kittredge, Lead Auditor, SCS Global

Mike Ferrucci, Lead Auditor, NSF

Kenneth Jolly, Associate Director, DNR Forest Service

Jack Perdue, DNR Forest Service

Bob Webster, Regional Forester

John Denning, Forest Manager, PGSF

Joyce Stoner, Administrator, PGSF

Noah Rawe, Forest Technician, PGSF

Jason Savage, 12-month contractual

Bo Sliger, Maintenance Supervisor

Wade Dorsey, Forest Manager, SRSF

Mark Beals, Forest Manager, GRSF

Jesse Morgan, Assistant Forest Manager, GRSF

Dave Marple, District Supervisor, Natural Resources Police

Ed Thompson, Natural Heritage Biologist, MDNR

Steve Carr, Land and Trails, DNR LAP

Eric Null, Park Service Planner, DNR

**Wednesday April 24, 2013, Green Ridge State Forest (GRSF)**

Anne Marie Kittredge, Lead Auditor, SCS Global  
Mike Ferrucci, Lead Auditor, NSF  
Kenneth Jolly, Associate Director, DNR Forest Service  
Jack Perdue, DNR Forest Service  
Bob Webster, Regional Forester  
Mark Beals, Forest Manager, GRSF  
Jesse Morgan, Assistant Forest Manager, GRSF  
Pete Kelly, Forest Technician, GRSF  
Ed Gates, GRSF Citizens Advisory Council  
Mark McMillan, District 6 Allegheny County, Natural Resources Police  
Anne Hairston-Strang, Forest Hydrologist, DNR  
Rob Feldt, Forest Resource Planning, DNR  
Eric Null, Natural Resources Planner, Maryland Park Service  
John Denning, Forest Manager, PGSF  
Noah Rawe, Forest Technician, PGSF  
Wade Dorsey, Forest Manager, SRSF

**Thursday April 25, 2013, Eastern District – Chesapeake & Pocomoke State Forests**

Mike Ferrucci, Lead Auditor, NSF  
Steven W. Koehn, Director / State Forester, Maryland DNR Forest Service  
Kip Powers, Regional Forester, DNR Forest Service  
Mike Schofield, CFP/PSF Manager, DNR Forest Service  
Alexander Clark, GIS Forester, Maryland DNR Forest Service  
Wesley Knapp, Ecologist, Maryland Natural Heritage Program  
William DeMar, Tech II, Maryland DNR Forest Service  
Lance Carroll, Natural Resources Technician II, Maryland DNR Forest Service  
Skip Jones, Parker Forestry  
Stacey Esham, Parker Forestry  
John Connors, Parker Forestry  
Gary Adelhardt, Park Manager, Pocomoke River State Park, ID Team Member

William Giese, Citizen's Advisory Committee  
Arthur Egolf, Egolf Forest Harvesting, Inc., Citizen's Advisory Committee – Logger  
Tony DiPaolo, Forester, Cropper Brothers Lumber Company, Citizens Advisory Board  
David Ray, Forester/Ecologist, TNC, Citizens Advisory Board  
SFI Inc Observers:  
Monique Hanis, Eli Weissman, Monika Gurzenski, Nick Lanyi, Gregor Macintosh

**Thursday April 25, 2013, Savage River State Forest (SRSF)**

Anne Marie Kittredge, Lead Auditor, SCS Global  
Kenneth Jolly, Associate Director, DNR Forest Service  
Jack Perdue, DNR Forest Service  
Bob Webster, Regional Forester  
Mark Beals, Forest Manager, GRSF  
Chuck Hoffeditz, Stakeholder  
Sunshine Brosi, Citizen's Advisory Board  
Steve Green, High Mountain Sports, Stakeholder  
Roger Rounds, Maintenance, SRSF  
Michael Johnson, SRSF  
Scott Campbell, Assistant Forest Manager, SRSF  
Brent Stemple, SRSF  
Jeramie Foy, SRSF  
Jackie Boylan, SRSF  
Bob Mayles, DNR Natural Resource Police  
Eric Null, Natural Resources Planner, Maryland Park Service  
John Denning, Forest Manager, PGSF  
Noah Rawe, Forest Technician, PGSF  
Wade Dorsey, Forest Manager, SRSF

## **2013 Audit Field Sites**

### **Potomac-Garrett State Forest (PGSF) Background**

Two separate state forests managed collectively as a single unit; 18,000 acres.  
Forest inventory crew for summer, to complete fourth year of a five year project (FIA)  
Super-storm Sandy (fall 2012) had a severe impact on the forest; considerable trail and road cleanup ongoing; timber salvage work  
No longer issuing Ginseng harvesting permits; based on FSC finding

Roads upgrades or routine maintenance: Off-road vehicle fund (\$12,000 per year on average); National Recreation Trail Grant (projects \$30,000; have been getting 1-2 grants per year); have access to dozer, grader, backhoe, dump truck which provide the match to the grants. There is a roads plan for the forest, including road classifications.

### **Tuesday April 23, 2013, Potomac-Garrett State Forest**

Lostland Run Road Rehabilitation Project: Completed road maintenance project funded through a National Recreation Trail Grant (projects \$30,000; have been getting 1-2 grants per year). Replaced 26 cross-drain culverts and associated grading and resurfacing on 2,000 lineal feet of a 3.5 mile section of road. Nice natural-looking stone headwalls and tailwalls. Needed work to replace culverts for intermittent and ephemeral streams has not been done due to delays obtaining permits through Maryland Department of the Environment.

Wallman PG-02-12: Crop-tree release thinning partially completed via a firewood contract with a program for handicapped workers (Community Action Program).

Wallman Invasive Species Control Project and Inventory, Compartments 21-26, Potomac State Forest, FY 2012 Annual Work Plan: Multi-year backpack application of Glyphosate to control Garlic Mustard. Focus on roadsides and drainage areas, with some work on interior slopes. Generally effective, but follow up monitoring and treatments have proven necessary.

ESA associated with the North Branch of the Potomac River; management for rattlesnake.

Kindness Demonstration Area:

8.5 acre overstory removal as a second-stage shelterwood. The preparatory cut/thinning in 2004 helped recruit regeneration. Post-harvest area has ample advanced regeneration.  
6.5 acre first or preparatory cut of shelterwood system. "Thinned" from below to 70% stocking per SILVAH Oak. Half of area also had understory treatment to cut and treat saplings. Residual stand consists of closely-spaced but undamaged large trees; excellent logging job.

Brier Ridge, Stand A, FY 2012 Annual Work Plan: 47-acre Allegheny hardwood stand marked and sold but uncut. Fern control applications have been completed. Prescription is a

“conditioning/seed cut” to reduce the basal area by one-third. Trees marked for removal including upper mark and stump marks.

Cranesville Road, Compartment 39B, FY 2012 Annual Work Plan: Completed 16-acre clearcut of 2 stands: 11 acres mixed oak/maple and 5 acres of Allegheny hardwoods. Slash managed to minimize deer browse including not lopping tops. Except for main stem skid roads the skid roads/trails have brush on them, preventing erosion. Good BMPs and protection of adjacent watercourses and HCVF (ESA).

Swallow Falls Road, Compartment 39A, FY 2012 Annual Work Plan: Completed 22-acre clearcut with installed deer exclosure fencing. Fencing is pulled tight and base is slightly buried. Supplemental planting of oak seedlings to augment natural regeneration. Deer exclosures are monitored monthly.

Handicapped Hunter Area, Compartment 33B, FY 2012 Annual Work Plan: Completed 9-acre clearcut with dispersed retention in Allegheny hardwoods. Completed 10 acre oak thinning from below.

### **Wednesday April 24, 2013, Green Ridge State Forest (GRSF)**

Dughill Road/GR-06-12: 18- acre variable retention harvest in 95 year old mixed oak stand. Completed late summer 2012. Retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals and within large island ravine that is connected to HCVF. Marked to retain. Monitoring inspection completed weekly and at close of sale.

Oldtown Orleans Road Salvage/GR-01-13: 38-acre variable retention harvest in 106-year old mixed oak stand. Overstory mortality approaches 100% resulting from Memorial Day 2011 hail storm. Snags and cavity trees and occasional live retention marked for retention (pine and oak). By contract retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals. Regeneration was damaged by hail as well as overstory. Silvah will be used to check regeneration following salvage. Routine/informal drive-by checks on regeneration are also used for sites like this that present difficult situations. DNR staff aware of potential issues. Some of the smaller dbh trees are producing epicormic sprouts and may stump sprout following harvest. Harvest plans were expedited through the review process including all review steps. To be harvested during 2013. DNR staff aware of potential issues that may result from the presence of non-native invasive plants. Adjacent private inholding owner contacted.

East Valley Road/GR-07-10. Access via closed ORV Trail. Timber Harvest operator improved access to landing (only). Marked and contracted pre-certification and harvested during summer 2012. Retention may be somewhat less than currently prescribed by DNR staff in post-certification sites but retention does meet FSC requirements. Retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals and within 1 large island ravine and 2 other large islands. Stakeholder question about availability of LWD. Concern which was satisfied when large quantities of LWD were

observed within retention areas. Access road beyond this harvest operation includes exposed bedrock, water routinely carried in road bed, eroded tracks and non-functional plugged culverts.

(Lunch at recreation picnic area including description of ARSWMA. See text below)

Anthony's Ridge Special Wildlife Management Area (~900 acres) and 1 of 3 special habitat areas. Currently a 100-year old matrix. Treatments for special species designed to maximize habitat (e.g. Golden Winged Warbler) based on BMPs for these species and including for example 10-acre regeneration harvests with residuals stems. This is a focal area for GWW in MD. Plan completed February 2013 with cooperation from multiple partners. Practices implemented and on schedule.

Oldtown Orleans Road/GR-01-10: 120-acre mixed oak and yellow poplar TSI initially marked and contracted pre-certification and remarked (2012) following ice damage and subsequent mortality. Currently being harvested with state of the art cut-to-length system. Operator interviewed by auditors. Operator well-trained and site routinely inspected by DNR staff.

(MF left to travel to other eastern MD DNR sites)

Green Ridge Road/GR-05-12: 43-acre variable retention harvest (oak, hickory, white pine flowering dogwood and serviceberry) with adequate oak regeneration. Marked to retain. Completed during fall 2012. Large block of retention surrounds SMZ and separates treatment area into 2 blocks. Snags and den trees retained. Non-native invasive plants not observed.

Francis O Zumbrun Overlook: Vista and platform located at the intersection of the Green Ridge Mountain Bike Trail Loop and the Great Eastern Trail and easily accessible roadside by car. Excellent opportunity for a variety of user groups.

#### **Thursday April 25, 2013, Savage River State Forest (SRSF)**

East Shale Road ORV Trail (trail work): Current trail is located partially on private land and a new design will re-route the trail to avoid private land. The culvert maintenance permit process is complete and will be funded by the capital maintenance budget plus recreation funds. Some of the existing trail section will be blocked off following the redesign and rerouting process. Several side trails already blocked/closed with large boulders. Some trail sections are already improved (stone dressing, 7 new culverts) with the use of \$30,000 recreation grant. One 24" culvert observed including stoned opening. Culvert size determined as part of permit process based on watershed size. Broad base dips along road. Stakeholder/trail user mentioned that this Trail is already much improved from previous condition.

Posey Row Sale (in progress)/SR-02-12: Operator=Jacob Yoder. 7-acre salvage within 14-acre stand that is landlocked and operated by adjacent Amish operator. Mortality ~ 100% (2007 gypsy moth followed by ice storm) with adequate RO regeneration. No retention designated within this 1st 7-acre contract located on stony silt loam that is well-drained. SI=

75-85. Road work completed by operator.

Bowman Hill Sale/SR-01-12 (in progress): Operator = Joe Colmer. Master Logger. Recent training includes BMPs, CPR and first aid. Top dressing stones completed by operator. Recent acquisition of 90-year old stand that has 2-age characteristics located on stony silt loam. SI=75. Designed as a commercial thinning to remove mature and defective trees and thin remaining stand. Stump spots missing from some cut and uncut cherry and RO stems. Some large oak and cherry stems have been marked to be removed while lower quality RM retained. While this is not a regeneration harvest, the removal of potential legacy and seed trees negatively impacts future retention options.

Road work completed by DNR Maintenance staff: Head wall/tail wall maintenance completed with SF budget on 3 locations within this stretch of road. Lunch in vans at this site.

16-acre Norway spruce sanitation (near mountain bike trail). Mortality from a lightning strike attracted beetle infestation and patches of mortality. Excellent response. Prescribed as a salvage plus thinning. May plant native WP in the future. Excellent stump spots and prescription implementation at this site lead auditor to believe that the issues described previously at Bowman Hill are an anomaly. Excellent use of signage for the public.

Elk Lick Campsites: Site observations in reaction to stakeholder comments about the lack of sanitary facilities, removal of CWD from stream sides, littering, campsite locations too close to water bodies. DNR management and staff pointed out rules and regulation signs at each campsite, routine DNR surveillance of campsites, low-use at these sites. These sites are routinely used by recreational vehicles that bring their own portable facilities, DNR conversations about resting or retiring some sites in the future. Most sites are not a problem Campsites located along Big Run have more use and more issues. The most recent “new” campsites were built 4-6 years ago.

Russell Road Sale/SR-01-11 (in progress): 160-acre salvage (2006/2007 Gypsy moth 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 will begin upslope of the salvage in the nearly adjacent sand meadows/barren (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). Salvage operation supports industry that is still interested in this material 6-7 years following defoliation. Prescribed fire minimizes risk of wild fire and implements a recommendation that may improve regeneration success of oak on this site. Black bear observed at base of slope. Excellent example of research and cooperation with Heritage for coordinated prescribed fire and TNC and others for assistance with a prescribed fire prescription of this size.

Bradford Historic Trail/Proposed location of St. John’s Rock ORV Trail: Met with stakeholder and smaller group of DNR management and staff (4-7 pm). This DNR trail

proposal is still in the very early stages and has yet to go through design and comment phases. Stakeholder showed DNR staff areas of concern and resources that require protection that are not compatible with wheeled trail access. Foot traffic is compatible with the historic trail resources.

#### **Thursday April 25, 2013, Mike Ferrucci Sites – Chesapeake & Pocomoke Forests**

WR45 - Foster Estate: 59-acre first thinning completed by trained logger Arthur Egoff. Confirmed methods to determine stocking review of special sites by ID Team, and that sale layout included marking of stand boundary and any wetlands or special site boundaries. Good-quality residual stand with no residual damage, no soil damage, and good utilization.

Sturges Creek Active harvest, Forest Friendly Logging: Interviewed Eddie Moore, confirmed CoC provisions, Pre-harvest checklist and twice-weekly site inspections by Parker Forestry (consultants for Maryland), training, safety program and First Aid kits, spill kit, and knowledge of important vegetation to protect including residual stand and “fuzzy” (uncommon) pine trees.

WR24 - Johnson & Johnson: Completed 19-acre shelterwood part of a 900-acre 1967-origin Loblolly Pine plantation. The harvest, completed in the fall of 2012, caused very minimal rutting and little soil disturbance. Foresters locally are concerned about not getting enough soil disturbance, mixing and compaction, to favor Loblolly pine.

P06 – Hudson Active harvest, Blades Road, Pocomoke State Forest: Active harvest, but logger Wayne Beauchamp was not working during visit (not related to weather). Overstory removal (27 acres) with significant retention (11 acres) in a 44-year old Loblolly pine plantation. Excellent job with retention, including clumped and dispersed, building clumps around features or important retention species (oak, Pond pine), protection of trail corridor and old house site. Utilization and sale supervision notes both are very good.

WR37 – Trader: Standard second thinning to 71 square feet of basal area per acre. May be thinning again in 10 years, but plans for the Delmarva Fox Squirrel zone are being discussed and may change the approach across the forest.

W46 – Campbell, Wicomico Demonstration Forest: First thinning in an extremely dense stand using a strip thinning. The portion of the stand that had previously been worked in has a better stand. Challenging project, but very good results.

**Maryland DNR Forest Service**  
**2013 Forest Audit Closing Meeting Attendance**

2013-04-30

**Auditors**

Anne Marie Kittredge  
SCS Global  
FSC Lead Auditor  
[amkittredge@gmail.com](mailto:amkittredge@gmail.com)

Mike Ferrucci  
NSF-ISR  
SFI Lead Auditor  
[mferrucci@iforest.com](mailto:mferrucci@iforest.com)

**MD DNR Forest Service**

Steve Koehn  
MD DNR Forest Service, State Forester  
[skoehn@dnr.state.md.us](mailto:skoehn@dnr.state.md.us)

Jack Perdue  
MD DNR Forest Service, Forest Resource Planning  
[jperdue@dnr.state.md.us](mailto:jperdue@dnr.state.md.us)

Anne Hairston-Strang  
MD DNR Forest Service, Forest Hydrologist  
[astrang@dnr.state.md.us](mailto:astrang@dnr.state.md.us)

Rob Feldt  
MD DNR Forest Service, GIS Forester  
[rfeldt@dnr.state.md.us](mailto:rfeldt@dnr.state.md.us)

Wade Dorsey  
Savage River State Forest, Manager  
[wdorsey@dnr.state.md.us](mailto:wdorsey@dnr.state.md.us)

Mark Beals  
Green Ridge State Forest, Manager  
[mbeals@dnr.state.md.us](mailto:mbeals@dnr.state.md.us)



**Appendix IV**



**SFI Reporting Form**

**One change:  
204,947 total acres**