



## Surveillance Audit Report

### 2010-2014 Sustainable Forestry Initiative® Standard

April 28, 2015

**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   FSC Lead Auditor: Kyle Meister

**D. Audit Dates:** April 7-10, 2015

**E. Reference Documentation:**

2010-2014 SFI Standard®; 2015-2019 SFI Standard®

Company SFI Documentation:

Rev. Level:

Date Revised:

**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 visit;
- Not acceptable with one or two major nonconformances - corrective action required;
- Several major nonconformances - the certification may be canceled unless immediate action is taken

**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

Minor changes only: New acting state forester Don Vantlassent working under a new governor who is expected to reduce budgets; otherwise there have been few personnel changes. All of the sustainable forest management plans have had slight updates in response to past audit findings. The CFP work plan required some modification to align with these changes. Timber Operations Order had minor corresponding 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: 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.*

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

**I. Corrective Action Requests:**

**Corrective Action Requests issued this visit (through NSF’s on-line audit tool) for SFI 2010-2014:**

1. Indicator 2.3.6 requires “Road construction and skidding layout to minimize impacts to soil productivity. Minor Non-conformance: Administrative challenges continue to delay the implementation of necessary road repairs and upgrades.
2. Indicator 2.4.2 requires “Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.” Minor Non-conformance: Management on the SRSF does not fully meet the requirement to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.

Corrective Action Plan is required within sixty days of this visit (for Minor Nonconformances). CARs will be verified during the next Surveillance Audit.

**Transitional Non-conformances against SFI 2015-2019 Forest Management Standard**

Indicator 8.1.1 requires organizations that “Program Participants will provide a written policy acknowledging a commitment to recognize and respect the rights of Indigenous Peoples.”

Transitional Minor Non-conformance: There is not a written policy acknowledging a commitment to recognize and respect the rights of Indigenous Peoples. This is a new requirement, and as such the Maryland Forest Service has until December 31, 2015 to address this gap.

Your Corrective Action Plans should be provided through your NSF On-line Interface. Any questions should be directed to your Client Relations Manager (CRM) at NSF-ISR. If you don’t know who your CRM is then please call the customer service number for NSF-ISR at 734-769-8010.

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

MAJOR(S): 0 MINOR(S): 2 Opportunities for Improvement (OFIs): 3; Transitional: 1

**H. Future Audit Schedule:**

Follow-up or Surveillance Audits are required by the Sustainable Forestry Initiative Standard®. The next Surveillance Audit is scheduled for May, 2016. The assigned lead auditor will contact you 2-3 months prior to this date to reconfirm and begin preparations. Recertification must be completed before May, 2017.

***Because this is a multi-site organization:***

The sampling plan requires audits of the central function and 2 of 6 sites (state forests) each year.

**Appendices:**

Appendix I: Surveillance Notification Letter and Audit Schedule

Appendix II: Public Surveillance Audit Report

Appendix III: Audit Matrix

Appendix IV: Attendees and Site Notes (includes Opening and Closing Meeting sign-in sheets)

Appendix V: SFI Reporting Form

**Appendix I**



**Surveillance Notification Letter  
and Audit Schedule**



March 17, 2015

Re: Confirmation of SFI Surveillance Audit, Maryland Forest Service

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

Dear Mr. ~~Purdue~~Perdue

We are scheduled to conduct the FSC and SFI 2015 Surveillance Audits of Maryland's state forest system the week of April 6. This letter provides the SFI audit plan; the FSC audit plan has been provided by Kyle Meister, SCS Lead Auditor.

The 2015 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. It also includes an assessment of your program against the new SFI 2015-2019 Forest Management Standard.

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

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

The audits will commence with an opening meeting on April 7 at 8 am at the Chesapeake Forest Office. The closing meeting will occur on Friday April 10, 2015 from 8 am to 9:30 am at a state park meeting room to be determined.

The proposed schedule for April 7 (please comment) includes:

- 7 am: (optional) breakfast at the Denny's Restaurant in Salisbury;
- 8-11 am: Chesapeake Forest Office; final hour devoted to PSF and CFP
- 11 am to 5 pm: field visits; 5 pm daily briefing;
- Optional dinner in Salisbury at 6:30 pm.

The outlines of our schedule for the remaining days is provided below; please add detail as needed:

April 8:

- 8 am to 2 pm field audits
- Drive to western Maryland

April 9:

- 8 am to 2 pm GRSF office and field audits
- 2 pm daily exit briefing
- Travel to Hagerstown hotel, audit team continues audit activities into evening
- Dinner with Maryland Forest Service personnel, allowing for follow-up discussions

April 10:

- 8 am to 9:30 Closing Meetings (~~location TBD by Maryland Forest Service~~DNR Greenbrier State Park, Boonsboro, MD)
- Up to 1.25 hours travel time from Hagerstown to BWI Airport
- Mike Ferrucci -12:05 flight; Kyle Meister -12:30 flight

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

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

During the SFI part of the audit I will:

1. Review progress on achieving SFI objectives and performance measures and the results of the management review of your SFI Program;
2. Review selected components of your SFI program and all of the new requirements of the SFI 2015-2019 Standards. Please assemble office evidence needed to confirm conformance to these requirements.
3. Verify continued effective implementation of corrective action plans from recent previous NSF audits;
4. Review logo and/or label use;
5. Confirm public availability of public reports;
6. Evaluate the effectiveness of planned activities aimed at continual improvement of your SFI Program; and
7. Evaluate the multi-site requirements.

### **Additional Requirements SFI 2015-2019 Standards**

The additional requirements associated with the new SFI 2015-2019 Standards are highlighted in the attached NSF Matrix (checklist). The NSF Lead Auditor will assess conformance with all of these additional requirements and is required to issue “transitional” corrective action requests (CARs) if evidence of conformance is not available. For any such transitional CARs the Maryland Forest Service must develop a plan for conforming by December 31, 2015. The transitional CARs will not be used by NSF to determine overall conformance (continued certification).

### **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 2015 audit will include 3 of these 6 as follows: Chesapeake Forest Lands, ~~Garrett~~ Pocomoke State Forest, and the Green Ridge State Forest. These forests were selected to include a broad cross-section of activities and of the sites and to facilitate travel. Random sampling was not employed in the selection of these 3 forests but will be used in the selection of sites to be visited

### **Field Site Selections**

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

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

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

Best Regards,



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

### Attachments:

- Mike Ferrucci's short bio
- Kyle Meister's short bio
- NSF's Checklist for the SFI 2015-2019 Standards  
(Note: The blank checklist provided in audit plan was deleted from the final report.)

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

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

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

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

Mike Ferrucci has 34 years of forest management experience. His expertise is in sustainable forest management planning; in certification of forests as sustainably managed; in the application of easements for large-scale working forests, and in the ecology, silviculture, and management of mixed species forests, with an emphasis on regeneration and management of native hardwood species. Mike has conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 34 states. Mike has been a member of the Society of American Foresters for over thirty-five 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.

### **Kyle Meister, FSC Forestry and Chain of Custody Lead Auditor**

Kyle Meister is a Certification Forester with Scientific Certification Systems. He has been with SCS since 2008 and has conducted FSC FM pre-assessments, evaluations, and surveillance audits in Brazil, Panama, Mexico, Costa Rica, Bolivia, Indonesia, India, Japan, New Zealand, Spain, and all major forest producing regions of the United States. He has conducted COC assessments in Oregon, Pennsylvania, and California. Mr. Meister has successfully completed CAR Lead Verifier, ISO 9001:2008 Lead Auditor, and SA8000 Social Systems Introduction and Basic Auditor Training Courses. He holds a B.S. in Natural Resource Ecology and Management and a B.A. in Spanish from the University of Michigan; and a Master of Forestry from the Yale School of Forestry and Environmental Studies.

**NSF SFI 2015-2019 Section 2: Forest Management Standard Checklist**  
(Note: The blank checklist provided in audit plan was deleted from the final report.)

## Appendix II



# Maryland DNR Forest Service SFI Summary Surveillance Audit Report for 2015

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

The Maryland DNR Forest Service initially obtained SFI Certification from NSF-ISR on July 24, 2003 (NSF-ISR initially certified the Chesapeake Forest in 2003, with two significant scope expansions since) and the program was re-certified in July, 2006. Initially only the Chesapeake Forest Lands were certified, with the Pocomoke State Forest added in 2009 as part of an expansion of scope that included other recently acquired lands. In 2011 the organization sought and was granted recertification within the expanded scope based on an audit of the six largest state forests against the SFI 2010-2014 Standard. Surveillance audits were conducted in 2012 and 2013.

The state forests included in the current scope were re-certified to the SFIS in April of 2014. This report describes the results of the 2015 Surveillance Audit designed to focus on changes in operations, the management review system, and efforts at continuous improvement. A subset of the SFI 2010-2014 requirements were selected for detailed review. In addition all of the new requirements of the SFI 2015-2019 Standards were reviewed to ensure that the organization is prepared to meet them by the deadline of December 31, 2015.

### Maryland's State Forests

Maryland DNR Forest Service is responsible for the management of the ~~215,607,04,533~~ acres of Maryland State Forests through a variety of designations. The Forest Service is supported by other agencies within the Department of Natural Resources including Wildlife, Fisheries, Heritage, and the Natural Resources Police. Various management plans provide a useful summary of the importance of these forestlands and the broad policy goals:

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

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

*"Forests, streams, valleys, wetlands, parks, scenic, historic and recreation areas of the state are basic assets. Their proper use, development, and preservation are necessary to protect*

*and promote the health, safety, economy and general welfare of the people of the state. It is the policy of the state to encourage the economic development and the use of its natural resources for the improvement of the local economy, preservation of natural beauty, and promotion of the recreational and leisure interest throughout the state." (Annotated Code of Maryland, Natural Resources Article §5-102)*

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

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

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

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

The audit was performed by NSF-ISR on April 6-10, 2015 by an audit team headed by Michael Ferrucci, Lead Auditor supported by Kyle Meister, 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.

SFI Objectives relating to procurement and other requirements that are outside of the scope of Maryland's SFI program were excluded from the scope of the SFI Certification Audit as follows:

- Indicator 2.1.4: Minimized plantings of exotic tree species.
- Indicator 2.1.7: Afforestation programs that consider potential ecological impacts of the selection and planting of tree species in non-forested landscapes.
- Performance Measure 2.5: Program Participants that deploy improved planting stock, including varietal seedlings, shall use sound scientific methods.

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

### **SFIS Audit Process**

The objective of the audit was to assess continuing conformance of the firm's SFI Program to the requirements of the Sustainable Forestry Initiative® Standard, 2010-2014 Edition and to assess readiness to meet the full set of requirements of the SFI 2015-2019 Standards.

NSF-ISR initiated the SFIS audit process with a series of planning phone calls and emails to reconfirm the scope of the audit, review the SFI Indicators and evidence to be used to assess conformance, verify that Maryland DNR Forest Service was prepared to proceed to the SFIS Certification Audit, and to prepare a detailed audit plan. NSF then conducted the SFIS Certification Audit of conformance to the SFI Standard. A report was prepared and final approval was done by an independent Certification Board Member assigned by NSF. Follow-up or Surveillance Audits are required by the 2010-2014 Sustainable Forestry Initiative Standard ®. The next Surveillance Audit is scheduled for May 2015.

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

During the audit NSF-ISR reviewed a sample of the written documentation assembled to provide objective evidence of SFIS Conformance. NSF-ISR also selected field sites for inspection based upon the risk of environmental impact, likelihood of occurrence, special features, and other criteria outlined in the NSF-ISR SFI-SOP. NSF-ISR also selected and interviewed stakeholders such as contract loggers, landowners and other interested parties, and interviewed employees within the organization to confirm that the SFI Standard was understood and actively implemented.

The possible findings of the audit included Full Conformance, Major Non-conformance, Minor Non-conformance, Opportunities for Improvement, Practices that exceeded the Basic Requirements of the SFIS, and Transitional Non-conformance.

### Overview of Audit Findings

Maryland's SFI Program demonstrated substantial conformance against the 2010-2014 SFI Standard. There were two non-conformances, and three "Opportunities for Improvement". The program has continued to exceed the standard in several areas. As such, the program has earned recertification. The program was also found to meet all of the new indicators of the new SFI 2015-2019 Standards except one. Details for the evaluation against both versions of the SFI Standard are provided below.

#### 2010-2014 SFI Standard

Two non-conformances were identified in the 2015 audit.

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

Minor Non-conformance: Administrative challenges continue to delay the implementation of necessary road repairs and upgrades.

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

Minor Non-conformance: Management on the [Savage River State Forest \(SRSF\)](#) does not fully meet the requirement to promote healthy and productive forest conditions to *minimize* susceptibility to damaging agents. At SRSF many stands are stressed and/or overstocked; regeneration problems are apparent, with silvicultural analyses and silvicultural prescriptions developed through SILVAH-Oak indicating the need for treatments.

Three opportunities for improvement (OFIs) were identified in the 2015 audit:

Indicator 2.2.68. Requires the "Use of management practices appropriate to the situation, for example: ... d. designation of streamside and other needed buffer strips..." when applying herbicides. There is an Opportunity for Improvement in the implementation of the herbicide application program on the eastern forests to ensure that contractors implement the spray plan correctly.

Additional Notes: On the Wango Pines herbicide project the aerial spray contractor neglected to avoid a clearly-designated “no spray” buffer around a cluster of plant species (horse sugar and sheep laurel) that are on the watch list. The needed buffer was clearly identified on the project map and had been discussed with the forester in charge, but apparently the pilot forgot about this sensitive site (others sensitive areas were avoided). Protocols for future aerial herbicide application projects have been modified to require an on-site briefing just prior to application to remind the pilot of the sensitive areas.

Indicator 4.1.8. requires organizations to “Consider the role of natural disturbances, including the use of prescribed or natural fire where appropriate...” There is an Opportunity for Improvement regarding timely implementation of critical prescribed fire projects.

Indicator 15.1.1 requires a “System to review commitments, programs and procedures to evaluate effectiveness.” There is an Opportunity for Improvement in the consistency and clarity of information in management reports (also provided to public on web sites) providing activity results (acres treated, etc.) in relation to plans.

There were four areas where the finding was “Exceeds the Requirements”:

The MD DNR program exceeds the requirements for promoting conservation of native biological diversity.

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

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

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

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

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

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

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

### **Transitional Non-conformances against SFI 2015-2019 Forest Management Standard**

Transitional Minor Non-conformance: There is not a written policy acknowledging a commitment to recognize and respect the rights of Indigenous Peoples. This is a new requirement, and as such the Maryland Forest Service has until December 31, 2015 to address this gap.

Indicator 8.1.1 requires organizations that “Program Participants will provide a written policy acknowledging a commitment to recognize and respect the rights of Indigenous Peoples.”

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### **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 support for 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 with members of two of the citizens advisory groups, 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.

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### **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*

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**Appendix III**



**Audit Matrix**

## NSF SFI 2015-2019 Section 2: Forest Management Standard Checklist

Note: The 2015-2019 checklist was used to facilitate the required review of progress towards meeting these new requirements by December 31, 2015.

### 1.2 Additional Requirements

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The Maryland Forest Service does not operate a fiber sourcing program and makes no use of on product labels or claims.

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### Objective 1. Forest Management Planning

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

#### Performance Measure 1.1

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Forest Management Plans are in place for all of the Maryland State Forests within the scope of certification. These plans are regularly updated.

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

- a. Requirement 1.1.1 d. is new or significantly revised. Transition rules apply until December 31, 2015.

b.  
 NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Reviewed management plans and Annual Work Plans for the CFP and GRFSF. Management plans for the Maryland State Forests include, and have included for several years, extensive sections addressing “d. biodiversity at landscape scales”. Plans address all of the required items.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Harvest levels are documented in Annual Work Plans and have been at or below levels identified in plans.

Green Ridge State Forest uses the area-control method, and the long-term plan shows 242 acres per year of harvests, while Annual Work Plans show lower numbers. The ten-year average has been 120 acres of final harvest.

The Savage River State Forest Woodstock model results show an AAC of 160-320 acres per year or 1.8 million board feet per year. Actual harvests have been very low, near zero in recent years.

The PGSF Woodstock model shows an AAC of 600 mbf per year, with the 2015 AWP of 552 mbf.

From Maryland Forest Service:

Chesapeake Forest / Pocomoke State Forest:

Pine pulpwood 39,651 tons harvested, Pine sawtimber 10,096 tons harvested

Green Ridge State Forest:

The allowable harvest at GRFSF is to manage 200 acres for end of rotation regeneration harvests. **We** **They have** managed 137 acres since the last audit.

Savage River State Forest:

Four harvests sold since last audit: SR-07-14, 172,766 Bd. Ft., SR-01-15, 41,875 Bd.Ft., SR-02-15, 90,380 Bd.Ft., SR-03-15, 48,406 Bd.Ft.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Information provided by MFS:

The five year forest inventory effort for the Western Maryland state forests has been nearly completed. For the Eastern Shore state forests the project will be entering its second and final year this season. As a result of a more complete dataset, we have been able to use this to better determine allowable harvests on these forests. Also, we wanted to improve our confidence at modeling the complex Western Maryland hardwood forests. We decided it was worth the expense to send Alex Clark (Eastern Region GIS Forester) to a refresh Woodstock modeling training offered through Remsoft with the specific focus on the Western Maryland forests. Alex then ran the models for the Western Maryland state forests.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The five year forest inventory effort for the Western Maryland state forests has been nearly completed. For the Eastern Shore state forests the project will be entering its second and final year this season.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: There are systems in place to track, report, and make information available regarding implementation of forest practices.

---

### Performance Measure 1.2

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

c. Requirement is new or significantly revised. Transition rules apply until December 31, 2015.

---

1.2.1. Program Participants shall not convert one *forest cover type* to another *forest cover type*, unless the conversion:

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

d. Requirement 1.2.1 is new or significantly revised. Transition rules apply until December 31, 2015.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

---

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

- a. *Productivity* and *stand* quality conditions and impacts which may include social and economic values;

- b. Specific ecosystem issues related to the site such as invasive species, insect or disease issues, riparian *protection* needs and others as appropriate to site including regeneration challenges; and
- c. Ecological impacts of the conversion including a review at the site and *landscape* scale as well as consideration for any appropriate mitigation measures.

e. Requirement is new or significantly revised. Transition rules apply until December 31, 2015.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The AWP and the ID Team ensure that the requirements are met. Conversions are driven by ecological considerations including restoring rare or under-represented cover types.

---

**Performance Measure 1.3**

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

Indicator:

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

f. Requirement is new or significantly revised. Transition rules apply until December 31, 2015.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

---

## Objective 2. Forest Health and Productivity

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

### Performance Measure 2.1

*Program Participants* shall promptly reforest after final harvest.

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Exotic species are not planted.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed during field reviews.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Afforestation work is not done on state forests, which are generally forested except for modest non-forest areas not suited to forest plantings or left open for ecological reasons.

---

**Performance Measure 2.2**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Review of planned and actual herbicide release projects in 2014 show that the program is modest in scope; plans were in place for 8 projects on 220 acres but only one project (Wango Pines Restoration) was implemented covering 113 acres. Documentation for this project showed that requirements were met and included the Herbicide Prescription Plan, the contract between Parker Forestry Services Inc. and AG AIR, LLC dated 9.18.14, Exhibit A providing chemicals, rates, and acres to be treated, and maps showing the proposed and actual treatment areas, sensitive sites containing a species of concern (watch list), and other special sites to be avoided, as well as other features useful to ensure proper application. The application was done in October 2014 without enough time as yet to allow for useful monitoring of impacts. Actual spray maps showed that the spray unintentionally impacted one location of a plant of concern (watch list).

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Wango Pines: Arsenal @ 8 oz most areas and 12 oz. windrows.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Arsenal (Imazypyr) @ 12 oz. is the label rate for sweet gum and red maple.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Arsenal is not on the WHO list. There is not a program in place at this time to check for WHO type 1A and 1B pesticides.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Arsenal is not on the WHO list. There is not a program in place at this time to check for

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2.2.6. Use of *integrated pest management* where feasible.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Required in herbicide contracts. AG AIR, LLC, 2 Airport Drive, Thomasville, PA 17364 is a licensed Maryland Pesticide Applicator.

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

**There is an Opportunity for Improvement in the implementation of the herbicide application program on the eastern forests to ensure that contractors implement the spray plan correctly.**

Audit Notes: Confirmed by interview, review of documentation: a, b, c, d, e, f, h, i, j.  
On the Wango Pines herbicide project the aerial spray contractor neglected to avoid a clearly-designated “no spray” buffer around a cluster of plant species that are on the watch list (horse sugar and sheep laurel). The needed buffer was clearly identified on the project map and had been discussed with the forester in charge, but apparently the pilot forgot about this sensitive site (others sensitive areas were avoided). Protocols for future aerial herbicide application projects have been modified to require an on-site briefing just prior to application to remind the pilot of the sensitive areas.

---

**Performance Measure 2.3**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: 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.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Field observations confirm the widespread use of erosion control measures. Water bars, placement of logging slash to stabilize disturbed soils or as a protective mat for heavily used skid trails, trucking mats, 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 2015 field audits.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

Eastern forests: confirmed consistently good-quality harvesting with respect to this indicator, including limited rutting, retained and fairly-dispersed woody debris, planned and well-spaced skid trails (generally parallel thinning corridors, but also pre-planned (flagged) main skid trails in heavier harvests.

Western forests: No issues were observed; harvests are carefully planned and work is inspected to ensure that site productivity is maintained.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

Eastern forests: confirmed consistently good-quality harvesting with respect to this indicator, with most removals either from thinning corridors or from the smallest trees in the rows between corridors. Western forests: 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. Harvests reviewed in the western forests were regeneration treatments, so there was limited opportunity to review this issue. Variable retention is employed as part of these harvest treatments. Trees are left to achieve several objectives, including some left to provide seed and structure for extended periods into the next rotation (stand); these trees were observed to be vigorous and consistent with scientific principles.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The SFMP and MFS Policy Procedure Manual contain clear criteria, including rutting guidelines.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

**2015 Minor Non-Conformance:** Administrative challenges continue to delay the implementation of necessary road repairs and upgrades.

Audit Notes: 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.

Interviewed the Acting State Forester and reviewed the Maryland Forest Service's response to the 2014 OFI. Road improvement projects have moved forward on several forests over the past year. There is a \$900,000 budget for forest road infrastructure repair associated with the DNR Critical Maintenance Program. Since the 2014 audit about \$80,000 has been committed and projects for nearly \$500,000 are nearly ready to start.

The Maryland Forest Service has assessed the road system and developed a prioritized list of road projects intended 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 projects are being done, but the highest priority sites, often involving ephemeral or intermittent streams, have not been addressed. The road and trail repair work viewed by past audit teams (none were viewed in 2015) has been superb but is not covering sufficient areas to catch up with the long-term backlog of road issues.

---

**Performance Measure 2.4**

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

Indicators:

2.4.1. *Program to protect forests from damaging agents.*

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: There is a program in place; there are some challenges (see next indicator).

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

**2015 Minor Non-conformance:** Management on the Savage River State Forest (SRSF) does not fully meet the requirement to promote healthy and productive forest conditions to *minimize* susceptibility to damaging agents. At SRSF many stands are stressed and/or overstocked; regeneration problems are apparent, with silvicultural analyses and silvicultural prescriptions developed through SILVAH-Oak indicating the need for treatments.

Audit Notes:

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 had 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 had been a lower priority, and some stands are significantly overstocked. Efforts to implement routine management have been uneven, with allowable harvest levels nearly attained in GRSF and PGSF. As indicated in previous audits harvest levels at the Savage River State Forest are well below planned levels (the AAC); since 2010 regeneration harvest levels have been approaching zero. The audit team did not visit SRSF in 2015 and so did not observe direct forest health impacts. Management plans emphasize maintaining proper stocking levels as the pest management strategy.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Maryland Forest Service is the lead forest agency; many state forest workers are trained as wild fire fighters.

---

### **Performance Measure 2.5**

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

Indicator:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

From Maryland Forest Service:

“Chesapeake Forest / Pocomoke State Forest:

The seed source for loblolly pine seedlings is Maryland.

The seed source for shortleaf pine seedlings is Missouri.

Potomac Garrett State Forest;

Couple hundred red oak seedlings planted as supplemental planting in Deer Exclosure. Seedlings from MD State Nursery, with seed collected in MD.

---

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

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

**Performance Measure 3.1**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Foresters plan and oversee all phases of management activities and are trained and experienced with BMPs. BMP implementation is required, is covered in contracts, and is described in the SFMPs.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: 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 document lists the BMPs.

---

3.1.3. Monitoring of overall *best management practices* implementation.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Tract Inspection Forms are used to document BMP inspections conducted during and at the completion of timber harvests.

---

**Performance Measure 3.2**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Protection of rivers, streams, lakes, and other water bodies and riparian zones is at the heart of the management program as expressed in the state forest management plans, policies, and programs. Trained foresters plan all vegetation treatments, and foresters supported by specialists plan infrastructure-related projects. These projects are then reviewed by experienced managers and by specialists as part of the ID Team and normal administrative processes. A strong program has been demonstrated.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: 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.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed by reviewing documents for harvest sites visited and by field observations.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

---

#### Objective 4. Conservation of Biological Diversity

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

##### Performance Measure 4.1

*Program Participants* shall conserve *biological diversity*.

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

**The MD DNR program exceeds the requirements for promoting conservation of native biological diversity.**

Audit Notes:

Each of the ~~5-five~~ State Forests is managed under a program that is designed to protect and enhance biodiversity as described in each ~~10-year management plan~~ Sustainable Forest Management Plan. The conservation of biological diversity is explicitly stated as the goal management operations. This program incorporates the use of an Interdisciplinary Team (ID team) for the review and approval process of management activities. The ID team includes land managers and a variety of specialists. Based on the results of interviews with participants, it is clear that the working relationships between ID team members remain effective and continue to improve on each of the ~~4-four~~ State Forests. Projects that are designed and implemented to conserve and enhance native biological diversity were observed at each of the state forests during the 2015 audit program including for example the restoration of Carolina bays in the Brookview Ponds ESA on the Chesapeake Forest and restoration of shale barrens on the Green Ridge State Forest.

From Maryland Forest Service:

“Chesapeake Forest / Pocomoke State Forest: Habitat management is an increasing portion of the role of the Heritage Ecologist. Areas that have been managed in recent years need to be surveyed to assess success, and numerous additional areas have been /are being managed for RTE species or habitat. The most significant of these are the Brookview Ponds ESA, Wango Pines ESA, and Powell Road Seeps ESA. Final harvests and thinning occur adjacent to and sometimes within these habitats.

Green Ridge State Forest: One ecological restoration project occurred within an ESA Shale Barren. Sole purpose of the management activity was to restore/enhance rare habitat/plant community.

Potomac Garrett State Forest: All management activities that would potentially impact RTE species were field verified by the Heritage ecologists as not have an impact.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

Audit Notes: Stand-level retention practices meet the policies of the Maryland Forest Service consistent with scientific information. Foresters take the time to assess the stands and identify the most important trees and other elements for retention. Mapping and other forms of record-keeping are superb.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

Maryland DNR designed and implemented a process for each prescription to include review and approval by the ID teams, Advisory Committees and other Maryland Forest Service personnel who primarily work on private forest lands. The coordination with staff who work primarily on private lands effectively promotes an understanding of state forest land resources within a matrix of private land resources. For example, old growth forests are largely found on state lands rather than private lands with the concept of Wild-lands — a designation that is solely found on state lands. In both regions the working relationship with TNC ensures landscape scale consideration and the opportunity for cooperative management practices that cross property ownership lines.

From Maryland Forest Service:

“Chesapeake Forest / Pocomoke State Forest: RSA’s have been identified and recorded in the GIS. Early successional & ESA’s are being managed by WHS guidelines.

Potomac Garrett State Forest: The seedling/sapling succession stage of our hardwood forests, could be considered under-represented. As such, management work, planned within the AWP is generally focused on regeneration of hardwood forests and enhancing this stage of forest growth. Distribution-approximate ; ( Forest wide/general management) Seed/sap=6/10%; poles=15/9%; sawtimber=80/75%

Habitat enhancement or restoration activities from the past year that have benefited wildlife habitat or function:

Chesapeake Forest / Pocomoke State Forest:

D14 Indiantown-Brookview Ponds ESA Project, WR12 Purnell-ESA Project.

Green Ridge State Forest

Removal of overgrown white pine plantations in the Kirk Orchard Early Succession Wildlife Habitat Management Area. Overgrown white pine plantations were removed, windrow brush piles were generated with debris and series of hard needle conifer seedlings, fruit trees, and openings were established to enhance American woodcock habitat and other early succession wildlife habitat.

Potomac Garrett State Forest

A)-RGS Grant funded: Habitat improvements, to permanent grassy openings via planting a grass legume mix , lime and fertilizer to make these small openings as productive as possible for a variety of birds and animals that utilize these openings.

B) – “Feathered Edge Cut” around perimeter of wildlife food plot/ grassy opening in handicapped hunter area of Kindness Demo Forest Area. This work marked and in contract negotiations to carry out this marginally commercial habitat improvement work by end of FY.

C) – all planned and completed timber harvests include wildlife habitat improvement elements, often leaning toward providing additional early succession habitat critical to a variety of species in need of conservation: including Gold winged Warblers, American Woodcock, etc.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

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 and Annual Work Plans reviewed provided good examples from the ID Team process from the past 12 months

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

The overall goals of the state forest system include protection and enhancement of biodiversity including G1-G2 species, RTE species, and species of concern. Management plans, AWP, interviews, and other programs (see quote below) confirm conformance.

From Maryland Forest Service: “Numerous surveys for Rare, Threatened and Endangered species have been conducted on CF/PSF lands during 2014. The vast majority of these have been updates or monitoring in existing Ecologically Significant Areas (ESAs). Some areas have been surveyed that appeared to contain high quality habitats outside of already existing ESAs but these yielded no new RTE species and thus no new ESAs designations. Implementation of harvests resulted in discovery of vernal pools and establishment of buffers on the Chandler Tract and on the Ruddick Tract.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

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.

West: Site visits confirmed that heads of drains (which are forested), vernal pools and other water bodies are not included in the timber sale area, demonstrating an approach going beyond the requirement.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Interviews with MFS, Heritage biologists, TNC, and other stakeholders indicate that efforts to control invasive species continue at many levels. A strategy for controlling such pests is in place, and a widespread assessment has been done. Tools and strategies have been developed. One example involves the informational fact sheets Maryland Forest Service has compiled on many invasive species that are causing management problems.

<http://www.dnr.maryland.gov/forests/programapps/pests.asp>. The state of Maryland supports the Maryland Invasive Species Council <http://www.mdinvasivesp.org/index.html> .

Invasive species control and prevention measures that have occurred this past year, from Maryland Forest Service:

“Chesapeake Forest / Pocomoke State Forest

Power washing equipment prior to harvest. Backpack sprayed a total of 54.6 acres of invasive species. Locations are stored within GIS.

Green Ridge State Forest

Herbicide treatment of ailanthus in and around shale barren restoration sites to remove ailanthus from barrens and eliminate nearby seed sources.

Potomac Garrett State Forest

Monitored and treated 16 non-native invasive species (NNIS) occurrences, addressed via our policy of Early Detection–Rapid Response, accounting for 55 ac. of treated area.

Savage River State Forest:

Japanese knotweed control measures taken along road way.”

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

**There is an Opportunity for Improvement regarding implementing critical prescribed fire projects.**

Audit Notes: Management plans and projects clearly reflect a deep understanding of natural disturbances and their roles in development of ecosystems, communities, and biological diversity and use this understanding in developing strategies and plans. The Maryland Heritage Program plays a key role, as do foresters and other specialists involved, all of whom understand the topic. Two significant restoration projects that were viewed in the field (restoration of Delmarva/Carolina bays at the Indiantown complex and vegetation control and prescribed burning on the Green Ridge State Forest) demonstrated the effective application of such knowledge.

From Maryland Forest Service:

“Chesapeake Forest / Pocomoke State Forest:

Two Rx burns occurred this past year for ESA restoration purposes.

Green Ridge State Forest:

35-acre prescribed woodland/shale barren restoration fire, approximately 10 acres warm season grass establishment/maintenance prescribed fires.

Savage River State Forest:

Warm season grass burns conducted by the Wildlife service. No wildfires.”

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**Performance Measure 4.2**

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

Indicators:

4.2.1. *Program to protect threatened and endangered species.*

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

**The MD DNR program exceeds the requirements for the protection of threatened and endangered species.**

Audit Notes:

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes:

Old Growth Ecosystem Management Areas (OGEMAs) and Potential Old Growth Management Area (POGMA) designations are extensive for the western forests. One was adjacent to a timber harvest area selected for review; this was depicted on maps and was buffered from impacts in the harvest plan and implementation.

As a result of intensive settlement and previous management/land use practices under former ownership in the eastern forest Old-growth forests and older forest communities are not common however other management protection zones are used in the eastern forests that are reserved from silvicultural management and will over time supplement this designations.

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**Performance Measure 4.3**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The Maryland Forest Service implements a robust interdisciplinary approach to identifying and protecting ecologically important sites.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Maps and management were confirmed, as reported elsewhere in this report. Two ecologically important sites were visited by the audit team: Brookview Ponds ESA on the Chesapeake Forest and Diehl Shale Barren Restoration Site on GRSF.

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**Performance Measure 4.4**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: ID team members participate in the audit program and through interviews confirm that a strong emphasis on biodiversity protection exists in the context of active forest management.

Botanists and ecologists review each proposed harvest and provide comments on those projects that may impact biodiversity or RTE species and natural communities. The relationship between Heritage staff and field managers continues to grow as confirmed through a variety of interviews and observations of staff interactions during the audit.

| Maryland DNR's Policy & Procedure Manual and each of the 5-five management plans refer to the process of extensive review by the ID team for each proposed project. These ID teams represent the primary method for ensuring that current scientific knowledge is incorporated into treatments.

Timber Operation Order Operation Order 2011-601 describes the composition of the ID team:

- (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)

Specialists involved in the 2015 audit include several forest ecologists, botanists, fisheries biologists.

Each demonstrated command of the scientific knowledge required to protect and manage biodiversity.

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

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

**Performance Measure 5.1**

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

Indicators:

5.1.1. *Program to address visual quality management.*

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: 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 & Procedure Manual section on “Visual Quality. Site visits did not identify any visual quality concerns.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed by field observations.

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**Performance Measure 5.2**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Very few “clean” clearcuts are done, most are regeneration harvests with significant levels of green-tree retention that appear more like heavy partial harvests.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: From Maryland Forest Service: “Potomac Garrett State Forest : 26 ac total, 26 ac avg size  
Savage River State Forest : 56.2 ac total, 18.7 ac avg size  
Green Ridge State Forest : 0 ac  
Eastern Shore : 47.7 ac total, 47.7 ac avg size (one seedtree harvest<sup>\*\*\*</sup>)”

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**Performance Measure 5.3**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: GIS tracks planned and completed harvests. Maps provided for each harvest (planned, on-going, completed) show good systems.

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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.*

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed by site visits.

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**Performance Measure 5.4**

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

Indicator:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

Audit Notes: Extensive recreation programs including hunt club leases on half of the [Chesapeake Forest CSP](#) and public hunting opportunities on all remaining lands, various recreational trails, campgrounds, boat launching areas, and other.

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**Objective 6. Protection of Special Sites**

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

**Performance Measure 6.1**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

Audit Notes: Maryland State Forests exceed the requirements based in thorough assessment of resources by specialists and foresters before and after projects are planned and implemented. Review of AWP’s, state forest plans, and other documents and interviews with internal and external stakeholders contribute to the finding.

As confirmed through interviews, MD DNR Heritage data is collected by Heritage biologists as well as by non-agency specialists. Based on data and advice, field staff identify and select special areas including for example representative sample areas for protection and for management and/or restoration. Management and restoration projects are planned, presented, reviewed and approved through annual work plans by the ID team which includes stakeholders and experts. Management plans and annual work plans are presented for review and comment to both experts and stakeholders. For example, Green Ridge State Forest management plan prescriptions include state listed or uncommon species, shale barrens communities, old growth and potential old growth, vernal pools and unique open habitats based on cooperation and advice from Natural Heritage. As observed during the 2014 and again 2015 audits at D14 within Indiantown Complex (CSF), the ongoing project is restoring a widespread Delmarva Bay natural community’s vegetation structure and hydrology through cooperative planning with Heritage staff, vegetation management by Heritage staff and contract operators and the use of prescribed fire by trained agency personnel.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Maps and observations confirmed; see examples throughout this report. A robust GIS is in place and is extensively used for the purposes referenced in this indicator.

## Objective 7. Efficient Use of Fiber Resources

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

### Performance Measure 7.1

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

Indicator:

- 7.1.1. *Program* or monitoring system to ensure efficient utilization, which may include provisions to ensure:
- management of harvest residue (e.g., slash, limbs, tops) considers economic, social and environmental factors (e.g., organic and nutrient value to future forests and the potential of increased fuels build-up) and other utilization needs;
  - training or incentives to encourage loggers to enhance utilization;
  - exploration of markets for underutilized species and low-grade wood and alternative markets (e.g., bioenergy markets); or
  - periodic inspections and reports noting utilization and product separation.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed by review at harvesting sites audited.

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**Objective 8. Recognize and Respect *Indigenous Peoples’* Rights**

To recognize and respect *Indigenous Peoples’* rights and traditional knowledge.

**Performance Measure 8.1**

*Program Participants* shall recognize and respect *Indigenous Peoples’* rights.

Indicator 8.1.1. *Program Participants* will provide a written *policy* acknowledging a commitment to recognize and respect the rights of *Indigenous Peoples*.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: There is not a written policy acknowledging a commitment to recognize and respect the rights of Indigenous Peoples. This is a new requirement, and as such the Maryland Forest Service has until December 31, 2015 to address this gap.

**Performance Measure 8.2**

*Program Participants* with forest management responsibilities on public lands shall confer with affected *Indigenous Peoples* with respect to sustainable forest management practices.

Indicator 8.2.1. *Program* that includes communicating with affected *Indigenous Peoples* to enable *Program Participants* to:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Such a program has been in place for many years. While there are no federally recognized tribes in Maryland, MD DNR has reached out to representatives of indigenous people of the state. No comments from tribal representatives have been received by MD DNR or its auditors related to sites of cultural significance on the certified FMU. With assistance from the Maryland Commission on Indian Affairs, has placed several Native American members on the Citizens Advisory Committee in the past. There are no tribes with legal rights or binding agreements to the FMU. No protected traditional knowledge is used for commercial or forest management purposes.

From the Maryland Forest Service: “Sections of in all the Sustainable Forest Management Plans provide guidance on Indigenous Peoples’ rights (see below). Other Special Management Areas (Chesapeake Forest, Pocomoke State Forest, SRSF, and PGSF) GRSF Recreation and Cultural Heritage: A number of special areas on the Chesapeake Forest lands have been identified, that require special consideration when developing management prescriptions. Old home sites, research areas and small cemeteries are common throughout the forest. Special Management Areas may also include historical, cultural or spiritually significant sites for indigenous peoples. Once a site has been identified and located in the field, its location and description are loaded into the forest GIS database. Protection levels can then be assigned and incorporated into the future planning efforts of forest activities. Most Special Management Areas require some form of preservation/protection. Any proposed activity or management within the vicinity of these special areas will be identified and reviewed as part of the Annual Work Plans (AWP) process. Managers are expected to make diligent field inspections for these areas as part of planning whatever work is planned.

Performance measures to judge the adequacy of those plans, and the subsequent management actions, should include:

- a) Each identified special area is marked on the ground and documented in the data set.
- b) Each plan is sufficient to protect the special values identified for each area.
- c) Field examination and monitoring reveals that the plan is being implemented properly and that the special values are, in fact, protected or enhanced as the plan indicated.

Chesapeake Forest Lands - Citizens Advisory Committee  
(similar in Pocomoke State Forest Sustainable Forest Management Plan)

Interest areas represented on the committee include the following: INDIGENOUS PEOPLES: A representative from one of the local indigenous tribes.”

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### Performance Measure 8.3

*Program Participants* are encouraged to communicate with and shall respond to local *Indigenous Peoples* with respect to sustainable forest management practices on their private lands.

Indicators:

8.3.1. *Program Participants* are aware of *traditional forest-related knowledge*, such as known cultural heritage sites, the use of wood in traditional buildings and crafts, and flora that may be used in cultural practices for food, ceremonies or medicine.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: This indicator was briefly reviewed; a program has been in place for many years; source Maryland Forest Service: “MD DNR Forest Service has met with Maryland Commission on Indian Affairs to present our forest management activity and forest certification program. Their primary interest has been the reinterment of native peoples remains that have been discovered during construction projects (and others) across the state. After reviewing their criteria for reinterment, it was obvious that Maryland DNR State Forest lands were not able to provide suitable locations.

As a result of this connection and contacting local indigenous people groups, we have had several that have shown a continued interest in local state forest activities and have joined several of our Citizens Advisory Committees.

Specific information regarding Indicator 8.3.1 has not been an issue. We do have provisions (permits) for gathering plants, etc. from state lands. Also for state land access (Minimal Impact Use Agreements) for ceremonies, etc. As mentioned in our evidence for 8.1.1, we document all known cultural sites. Also, all state forest proposals are reviewed by the Maryland Historical Trust prior during the planning phase.”

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8.3.2. Respond to *Indigenous Peoples’* inquiries and concerns received.

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: No concerns have been received recently.

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## Objective 9. Legal and Regulatory Compliance

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

### Performance Measure 9.1

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

Indicators:

9.1.1. Access to relevant laws and regulations in appropriate locations.

NA     Conformance     Exceeds     O.F.I.     Major NC     Minor NC  
Audit Notes: Not reviewed during the 2015 SFI Audit.

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

NA     Conformance     Exceeds     O.F.I.     Major NC     Minor NC  
Audit Notes: Professional foresters, specialists, AWP review process.

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

NA     Conformance     Exceeds     O.F.I.     Major NC     Minor NC  
Audit Notes: Google search and interviews; no issues.

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### Performance Measure 9.2

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

Indicators:

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

NA     Conformance     Exceeds     O.F.I.     Major NC     Minor NC  
Audit Notes: Not reviewed during the 2015 SFI Audit.

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

NA     Conformance     Exceeds     O.F.I.     Major NC     Minor NC  
Audit Notes: Not reviewed during the 2015 SFI Audit.

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

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

**Performance Measure 10.1**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

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**Performance Measure 10.2**

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

Indicator:

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The MD SIC met three times during 2014 (two were conference calls, see attached). The MD DNR-Forest Service is a member and actively participates in these meetings.

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**Performance Measure 10.3**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

## Objective 11. Training and Education

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

### Performance Measure 11.1

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

**Performance Measure 11.2**

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

Indicators:

11.2.1. Participation in or support of *SFI Implementation Committees* to establish criteria and identify delivery mechanisms for *wood producer* training courses and periodic continuing education that address:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: The MD SIC met three times during 2014 (two were conference calls). The MD DNR-Forest Service is a member and actively participates in these meetings. In FY14 Maryland Forest Service provided \$6,000 to the Maryland Master Logger Program and plan to provide \$6,500 for FY 2015. "That amount will increase (funding permitting) \$500 per year until topping out at \$8,000 in FY18."

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Continuing education is a component of the training.

11.2.3. Participation in or support of *SFI Implementation Committees* to establish criteria for recognition of logger certification programs, where they exist, that include:

- g. completion of *SFI Implementation Committee* recognized logger training *programs* and meeting continuing education requirements of the training *program*;
- h. independent in-the-forest verification of conformance with the logger certification *program* standards;
- i. 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*;
- j. use of *best management practices* to protect water quality;
- k. logging safety;
- l. compliance with acceptable *silviculture* and utilization standards;
- m. aesthetic management techniques employed where applicable; and
- n. adherence to a management or harvest plan that is site specific and agreed to by the forest landowner.

NA     
  Conformance     
  Exceeds     
  O.F.I.     
  Major NC     
  Minor NC

Audit Notes: In FY14 Maryland Forest Service provided \$6,000 to the Maryland Master Logger Program. In FY15 we will provide \$6,500 when we get an invoice from Extension. That amount will increase (funding permitting) \$500 per year until topping out at \$8,000 in FY18.

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## Objective 12. Community Involvement and Landowner Outreach

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

### Performance Measure 12.1

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

**Performance Measure 12.2**

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

Indicator:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Not reviewed during the 2015 SFI Audit.

---

**Performance Measure 12.3**

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed active participation by Maryland Forest Service and/or contractors by reviewing agenda for December, 2014 meeting and minutes for two other SIC meetings.

---

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: SIC participation confirmed. Forests maintain logs of complaints. AWP and Advisory Committee processes.

---

### Objective 13: *Public Land Management Responsibilities*

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

#### Performance Measure 13.1

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: MFS has a very thorough process for involvement in public land planning. Annual work plan drafts are provided to citizen advisory councils and field visits scheduled to solicit input. After these revisions are made the drafts are made available for review by the general public. The web site and the AWP's contain information on the review process, and the results of the input are summarized in the AWP.

The most frequently used means of seeking and considering input on an annual basis is the Public consultation process for AWP. The first draft is made by management staff, this is reviewed along with necessary field visits by DNR's internal interdisciplinary team, the revision is reviewed by the Citizen's Advisory Committee, and then it is put on the web for 30 day review period. A public announcement is distributed to every major news outlet in the State, plus Patch.com and several relevant blog sites

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Stakeholders including community (social), ecological, and economic interests observed the audits and were interviewed. Citizen Advisory Committees are set up for the forests or groups of forests; meeting minutes and agendas were reviewed. Forests maintain "complaints" logs; review indicated that complaints are not regular and are recorded including follow-up actions.

---

## Objective 14. Communications and Public Reporting

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

### Performance Measure 14.1

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

Indicator:

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Confirmed on SFI's website that the reports from 2013 and 2014 are posted and contain the required information.

---

### Performance Measure 14.2

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

Indicators:

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Response was received by SFI Inc.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Work sheets used to compile report were reviewed.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

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

---

## Objective 15. Management Review and Continual Improvement

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

### Performance Measure 15.1

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

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

### **There is an Opportunity for Improvement in the consistency and clarity of information in management reports (also provided to public on web sites) providing activity results (acres treated, etc.) in relation to plans.**

Audit Notes: Reviewed information provided in responses to the 2014 OFI for SFI Indicator aligned with 15.1.1 and conducted interviews.

All forests conduct and document regular logging inspections & seedling survival/regeneration counts.

Monitoring of ESA restoration projects by Heritage.

CF/Pocomoke: Bi-weekly meetings between the Forest Manager and the Contract Management.

Individual harvests are reviewed along with productivity per site. Quarterly reports are also provided to the Forest Manager, which include volume and income. Trail counters have been installed on recreational trails.

IDT and Citizens Advisory Committee processes for review of the Annual Work Plans includes some effort to inform the members of these groups to visit sites previously reviewed which have had subsequent activity.

This has been more effective as an informal review activity for the IDT than for the CAC.

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

Self-audit 3/26/15 included MFS (4) and Parker Forestry (3) and involved review of several projects and filling out AWP Forest Harvest Proposal forms as the method for recording the results of site-specific reviews.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: Reviewed the information provided in responses to the 2014 OFI for SFI Indicator aligned with 15.1.1 to find conformance. State Forest Managers meet at least 3 times per year, March and September regular and broad meetings (certification is one agenda item), with one other meeting each year focused on certification.

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

NA       Conformance       Exceeds       O.F.I.       Major NC       Minor NC

Audit Notes: "Forest Management Certification Review" held 10.22.14 attended by managers of the six state forests within the scope, the consultant, and management team from the central office.

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## Multi-site Certification – Two Options

A multi-site organization is defined as an organization having an identified central function (hereafter referred to as a central office – but not necessarily the headquarters of the organization) at which certain activities are planned, controlled or managed and a network of local offices or branches (sites) at which such activities are fully or partially carried out.

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

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

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

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

A legal or contractual link shall exist between all sites.

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

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

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

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

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

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

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

Yes       No      Evidence      Governor’s signed commitment.

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

Yes       No      Evidence:      Jack Perdue is responsible for “Public Lands Stewardship”. He

provides guidance, templates, etc. used for most aspects of state forest management and for certification-specific issues.

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

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

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

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

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

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

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

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

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

Yes       No      Evidence: Corrective measures would be listed on the "Forest Practices Review" form.

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

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

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

Sites implement and maintain the requirements of the relevant standard.

Yes       No      Evidence: See matrix above.

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

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

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

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

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

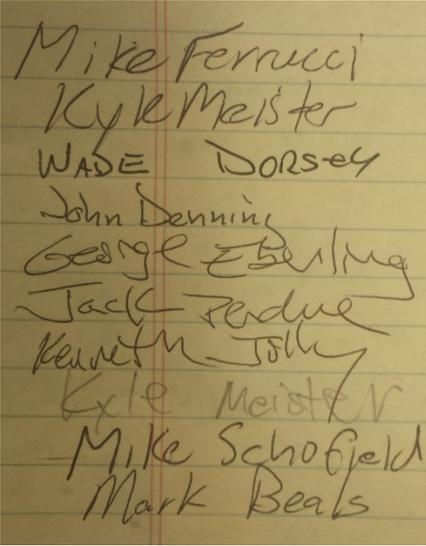
Yes       No      Evidence: Interviews and review of the notes of the formal management review. No follow-up actions were entered on the forms reviewed by the audit team.

Appendix IV



Appendix IV: Attendees and Site Notes

Sign-in Sheets

Opening Meeting - April 7, 2015	Closing Meeting - April 10, 2015																																										
<p>MARYLAND STATE FORESTS 4-7-15</p> <table border="1"> <thead> <tr> <th>NAME</th> <th>ORGANIZATION</th> </tr> </thead> <tbody> <tr> <td>Mike Ferrucci</td> <td>NSF (SFI Auditor)</td> </tr> <tr> <td>Kyle Meister</td> <td>SCS (FSC)</td> </tr> <tr> <td>Jack Perdue</td> <td>DNR-FS</td> </tr> <tr> <td>Anne Hairston-Stang</td> <td>DNR Forest Service</td> </tr> <tr> <td>Mike Schofield</td> <td>DNR-MFS</td> </tr> <tr> <td>Don VanHassent</td> <td>DNR-Forest Service</td> </tr> <tr> <td>Skip Jones</td> <td>Parker Forestry Services</td> </tr> <tr> <td>Kenneth Jolly</td> <td>DNR-FS</td> </tr> <tr> <td>Stacy Esham</td> <td>PFS</td> </tr> <tr> <td>STEPHEN PAYNE</td> <td>NRP</td> </tr> <tr> <td>John Connor</td> <td>PARTNER FOR SERV.</td> </tr> <tr> <td>* Brett Cookley</td> <td>DNR - Fisheries Service</td> </tr> <tr> <td>* Tony DiPaolo</td> <td>Glatfelter</td> </tr> <tr> <td>* Gary Adelhardt</td> <td>DNR - Potomac River State</td> </tr> <tr> <td>* Wesley Knapp</td> <td>DNR - Ullrich + Ventgo Same</td> </tr> <tr> <td>George Eberling</td> <td>DNR-FS</td> </tr> <tr> <td>John Power</td> <td>DNR-FS</td> </tr> <tr> <td>Armande Ulan</td> <td>DNR-FS</td> </tr> <tr> <td>* John F. Wilson</td> <td>MDNR - CAP</td> </tr> <tr> <td>Pete Dolan</td> <td>MDNR - CCS</td> </tr> </tbody> </table> <p>* TOT member - review ANRP draft but we su</p>	NAME	ORGANIZATION	Mike Ferrucci	NSF (SFI Auditor)	Kyle Meister	SCS (FSC)	Jack Perdue	DNR-FS	Anne Hairston-Stang	DNR Forest Service	Mike Schofield	DNR-MFS	Don VanHassent	DNR-Forest Service	Skip Jones	Parker Forestry Services	Kenneth Jolly	DNR-FS	Stacy Esham	PFS	STEPHEN PAYNE	NRP	John Connor	PARTNER FOR SERV.	* Brett Cookley	DNR - Fisheries Service	* Tony DiPaolo	Glatfelter	* Gary Adelhardt	DNR - Potomac River State	* Wesley Knapp	DNR - Ullrich + Ventgo Same	George Eberling	DNR-FS	John Power	DNR-FS	Armande Ulan	DNR-FS	* John F. Wilson	MDNR - CAP	Pete Dolan	MDNR - CCS	 <p>Mike Ferrucci          Kyle Meister          WADE DORSEY          John Denning          George Eberling          Jack Perdue          Kenneth Jolly          Kyle Meister          Mike Schofield          Mark Beals</p> <p>Mike Ferrucci, NSF          Kyle Meister, SCS</p> <p><b>Maryland Forest Service:</b>          Kenneth Jolly,          Jack Perdue          George Eberling          John Denning          Wade Dorsey          Mark Beals</p>
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### List of FME Staff Consulted

Name	Title
Jack Peardue	DNR-Forest Service
Anne Hairston-Strang	DNR-Forest Service
Mike Schoefield	DNR-MFS
Don VanHassent	DNR-Forest Service
Stephen Payne	DNR-NRP
Brett Coakley	DNR-Fisheries
Gary Adelhardt	DNR-Forest Service
Wesley Knapp	DNR-Wildlife & Heritage
<del>George Elberley</del>	<del>DNR-Forest Service</del>
Kip Powers	DNR-Forest Service
Alexander Clark	DNR-Forest Service
John F. Wilson	DNR-LAP
Pete Dolan	DNR-CCS
Mark Beals	DNR-Forest Service
Jesse Morgan	DNR-Forest Service
Eric Mull	DNR-Forest Service
<del>Don VanMassent</del>	<del>DNR-Forest Service</del>
George Eberling	DNR-Forest Service
Steve Carr	<del>DNR-LAP Park Service-Trails planner</del>
Wade Dorsey	DNR-Forest Service
John Denning	DNR-Forest Service
Jason Scavage	DNR-Forest Service
Mike Johnson	DNR-Forest Service
Noah Rowe	DNR-Forest Service
Scott Campbell	DNR-Forest Service
Jeff Sweitzer	DNR-NRP
Kenneth Jolly	DNR-Forest Service
Ed Thompson	DNR-Wildlife & Heritage
Pete Kelley	DNR-Forest Service

### List of other Stakeholders Consulted

Name	Organization
Skip Jones	Parker Forestry
John Connor	
Stacy Esham	
Bill Giese	Citizen Advisory Committee
Tony DiPaolo	
Deborah Barber	
Donnell Keech	
Francis Zumbrun	

### **April 6, 2015 Chesapeake and Pocomoke State Forests**

Opening Meeting: Introductions, client update, review audit scope, audit plan, intro/update to FSC and SCS standards and protocols, review of open CARs/OBS, final site selection

Site 1. P01 Sturges Creek, Tract 2 – Stand 15- first pine thinning started April 2013 but suspended work; started again and completed in September 2014 (70 square feet of basal area). Retention of hard-mast hardwoods. Minimal rutting and residual stem damage, and reasonable utilization were observed. BMPs to protect RTE species in adjacent power line right-of-way implemented to avoid negative impacts, primarily through designating log landings away from the area. Part of future Delmarva Fox Squirrel zone. Natural Heritage staff signed off on sale after conducting preliminary environmental review.

Site 2. WR10 Ruddick Tract, Stand 20 –first thinning; dry portions cut February 2014, and wetter sections done in September 2014. Confirmed that special sites (ESA 1, ESA 3, and an archeological site) were protected by buffering them from harvesting. Interviews with Citizens Advisory Committee (CAC).

Site 3. P02 Nazareth Church, Tract 7- Stand 8 – Pond Pine seed tree harvest was completed during the fall of 2014. Block #3 was inspected. The prescription had been for a clearcut with reserves, but this was changed to seed-tree harvest. During the harvest set up Parker Forestry (consultants) identified Pond Pine throughout the site and marked them for retention. Each retained tree has been entered as a point on the GIS.

Site 4. WR24 Johnson & Johnson, Stand 3- Planned aerial Herbicide Treatment on a site where hardwood control is needed to achieve stocking goals in a stand that had received a seed-tree regeneration treatment. Foresters have thoroughly assessed the site, mapped the presence of desirable oak sapling and sprouts, and designed a treatment plan to avoid these and to spray areas where undesirable maple and gum trees require control. Also reviewed documentation for and discussed the completed Wango Pine herbicide treatment.

Site 5. P04 Dividing Creek Tract 13 – Stand 8 – first thinning (formerly Dividing Creek Compartment #22) completed mid-January 2015. Residual stocking was 90 square feet of basal area per acre, and there were no issues with rutting or residual stand damage. Use of slash on skid trails to avoid rutting and compaction. Discussion of typical rotation ages, pre-commercial and commercial thinnings.

Site 6. WR 40 Dunn Swamp, Stand 94 – pre-commercial thinning of a planted stand on former farm land intended to develop forest cover to support water-quality improvement goals. A ditch running through the stand has had water control structures installed to slow water movement off site. Plantation has volunteer pine, cedar and hardwood and was overstocked, so a pre-commercial thinning was implemented targeting maple, gum, and pine.

Stop 7. Parker Forestry Services office to review and discuss records pertaining to:

- Safety and training
- Chemical Use
- Timbersales and Chain of Custody

### **April 8, 2015 Chesapeake State Forests**

Sites 1, 2, and 3 are three of four main blocks of the Brookview Ponds Restoration project. The entire 873-acre Indiantown complex is former industrial pine plantation being restored with an emphasis on the Delmarva Bays (also known as Carolina Bays). In the 1970s the tract was cleared, tops and slash windrowed, most areas bedded and ditched, and all planted with Loblolly Pine, followed by chemical release. These treatments altered the vegetation and hydrology to the detriment of biodiversity. The project goal is to “contribute to the restoration of Carolina Bay marshes, rare and endangered species populations, and upland oak forest” by the commercial harvest of all pine and most hardwoods within 200 feet of the edges of the bays, thinning pine stands further away, and later herbiciding all trees within the bays, and then by implementing a regular program of prescribed burns.

Site 1. D14 Indiantown, South Quad –restoration harvest recently completed; work started in January 2014 halted after a few days because conditions were too wet, with some areas of rutting nearly reaching the CFP excessive threshold of 12-inches deep for more than 50 feet; the harvest resumed mid-July and was completed August 5, 2014. Objectives were considered met, with some larger undesirable hardwood trees left standing because loggers

believed them to be oak trees. Use of prescribed fire likely should kill these trees as they are less tolerant than oaks to fire.

Site 2. D14 Indiantown, West Quad –restoration harvest recently completed; see harvesting details for Site 1 above. Reviewed a major portion of harvest area including the largest bay, which has some of the desired grasses already.

Site 3. D14 Indiantown, North Quad –restoration harvest completed 3 years ago, prescribed burn attempted but halted after small test burn because conditions were not suitable; goal is to burn in the fall of 2015 if conditions are suitable. Vegetative response met expectations, with dense growth of plant communities associated with Delmarva Bays (e.g., grasses, sedges, and other herbaceous plants), which was the goal. Burns are needed to control undesirable tree invasion of Bay and surrounding clearcut uplands, including undesirable hardwood seedling/sapling/stump sprouts (maple and gum) and volunteer Loblolly pine. Burns are also required to sustain Delmarva Bay plant communities, which are less tolerant of shade.

Site 4. Bennett Tract, second thinning completed in 2014 by Timber Harvest Inc. Stand planted in 1986 with significant amount of volunteer Loblolly, then herbicide release in 1989, resulting in a somewhat natural-looking pine stand. First thinning in 2002 was described as having somewhat wide corridors and not enough thinning between, and thus high stocking. The recent thinning lowered stocking to basal area of about 100, where the target was 90. Logging quality appeared excellent with no residual stem damage or rutting. Harvest took place during deer season with efforts to manage the interactions including investment in gravel and chips to provide alternate parking area for hunters.

#### **April 9, 2015: Green Ridge State Forest**

Office Discussions:

- Progress made on road work
- Complaints, training, and updates on forest inventory
- Citizens Advisory Committee: meets annually, very close working relationships between CAC and many of the ID Team Members
- Tours: Home Ground, work with colleges
- Outreach: Appalachian Forest Heritage Area, many others (see AWP).

Site 1. Poly Neil Road Silviculture Site – Sold, not started variable retention/ regeneration harvest covering 32 harvest acres, 54 managed acres. Reviewed harvest area access, layout including avoiding sensitive areas, selection of variable retention, assessment and presence of regeneration, and sale contract, including chain of custody requirements. Multiple species, size classes, and forms are retained for future timber value, biodiversity, and snags/ wildlife habitat.

Site 2. Zumbrun Overlook Recreation Site – This recently-completed recreation site includes a parking area, interpretive signs, a short, accessible trail, a viewing platform, and a vista created through a timber sale reviewed on a past audit. The interpretive signs are high quality and informative, including history, ecology, and forest management information. The site is very well constructed and maintained, links to the existing 12-mile mountain bike trail and the new Great Eastern Trail, and provides an opportunity for a new 2-mile circuit trail. Interviews with CAC members and security personnel.

Site 3. Diehl Shade Barren Restoration Site – The long-term restoration project and the more recent 35-acre Diehl Barren Burn Unit were reviewed. The burn objectives on this moderate to steeply-sloping site were met. Discussed challenges involved with the needed expansion of the prescribed burning program.

Site 4. Green Ridge Road Silviculture Site – This completed 15-acre regeneration/variable retention harvest was planned and implanted in ways to protect the adjacent Environmentally Sensitive Area (ESA) while salvaging infested Ash and regenerating the stand. Interviews with CAC members.

Site 5. Mertens Road Salvage Harvest Site. The harvest activity on this 25 acre salvage/regeneration site is nearly complete, with retention, regeneration, utilization, and site impacts all reviewed and found to be acceptable. This stand and others were severely damaged by a hail storm in 2011. Despite the urgency associated with needed

salvage the project went through standard planning and review of the Annual Work Plan process while still being sold quickly by “flipping” the 2013 and 2014 AWP.

Site 6. Gordon Road proposed culvert replacement, graveling and regarding. Inspected two locations where stream-crossing infrastructure is failing and replacement culverts are needed. Culverts are partially plugged, with some parts of roads failing due to overtopping of culverts. This area was identified prior to the 2013 AWP and the needed work described and approved in that plan, but funding has been challenging to obtain. The site is part of a larger project that was identified as high priority for repairs, but a project plan is pending the completion of higher priority work on other forests.

Site 7. Gordon Road, Black Sulfur Crossing- The stream-crossing here includes a culvert with headwalls constructed from railroad ties. The headwalls are crumbling, the culvert is partially-blocked, and water has crossed and begun to erode the road. The site is part of a larger project that was identified as high priority for repairs, but a project plan is pending the completion of higher priority work on other forests. Overflow ditches and culverts demonstrate evidence of frequent failure and replacement, as well as hydrological disconnectivity of streams on either side of the road.

**April 10, 2015: Greenbrier State Park**

Closing Meeting and Review of Findings (8:00am-9:30am): Convene with all relevant staff to summarize audit findings, potential non-conformities and next steps

**Appendix IV**



**Appendix V: SFI Reporting Form (no changes, not needed)**