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FOREST MANAGEMENT AND STUMP-TO-FOREST GATE CHAIN-OF-CUSTODY SURVEILLANCE EVALUATION REPORT

State of Maryland Department of Natural Resources

Forest Service

SCS-FM/COC-00069P

580 Taylor Avenue

Annapolis, MD 21401

Jack. L. Perdue, Public Lands Stewardship

<http://www.dnr.state.md.us/forests/>

CERTIFIED	EXPIRATION
04/29/09	04/29/14

DATE OF FIELD AUDIT
04/22/13
DATE OF LAST UPDATE
07/03/13

Organization of the Report

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the general public and is intended to provide an overview of the evaluation process, the management programs and policies applied to the forest, and the results of the evaluation. Section A will be posted on the FSC Certificate Database (<http://info.fsc.org/>) no less than 30 days after issue of the certificate. Section B contains more detailed results and information for the use of by the FME.

FOREWORD

Cycle in annual surveillance audits			
<input type="checkbox"/> 1 st annual audit	<input type="checkbox"/> 2 nd annual audit	<input type="checkbox"/> 3 rd annual audit	<input checked="" type="checkbox"/> 4 th annual audit
Name of Forest Management Enterprise and abbreviation used in this report:			
State of Maryland Department of Natural Resources Forest Service (DNR or FME)			

All certificates issued by SCS under the aegis of the Forest Stewardship Council (FSC) require annual audits to ascertain ongoing compliance with the requirements and standards of certification. A public summary of the initial evaluation is available on the SCS website www.scscertified.com.

Pursuant to FSC and SCS guidelines, annual / surveillance audits are not intended to comprehensively examine the full scope of the certified forest operations, as the cost of a full-scope audit would be prohibitive and it is not mandated by FSC audit protocols. Rather, annual audits are comprised of three main components:

- A focused assessment of the status of any outstanding conditions or Corrective Action Requests (CARs; see discussion in section 4.0 for those CARs and their disposition as a result of this annual audit);
- Follow-up inquiry into any issues that may have arisen since the award of certification or prior to the audit; and
- As necessary given the breadth of coverage associated with the first two components, an additional focus on selected topics or issues, the selection of which is not known to the certificate holder prior to the audit.

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SECTION A – PUBLIC SUMMARY

1.0 GENERAL INFORMATION

1.1 Annual Audit Team

Auditor Name:	Anne Marie Kittredge	Auditor role:	Lead Auditor
<p>Qualifications: Anne Marie Kittredge is a Forest Management Lead Auditor with experience conducting audits for large and small private and public landowners. Anne Marie also conducts Lead Auditor Chain of Custody audits under the SFI, FSC and PEFC Standards, is qualified as a Lead Auditor (ISO 19011) and has authored >500 reports for a broad range of landowners, manufacturers, distributors and brokers. Anne Marie has > 20 years of experience in traditional forest management, wildlife habitat management, marketing and utilization and forest cutting practices regulations. Anne Marie's experience as a state forester in Massachusetts focused on management of FSC certified state-owned forest lands, forest cutting practice regulation enforcement as well as private landowner assistance and current use certification administration. Anne Marie earned both MS and BS in Forestry from the University of Massachusetts in Amherst.</p>			
Auditor Name:	Mike Ferrucci	Auditor role:	Auditor
<p>Qualifications: Mike Ferrucci is the SFI Program Manager for NSF – International Strategic Registrations and is responsible for all aspects of the firm’s SFI Certification programs. He is qualified as a RAB-QSA Lead Auditor (ISO 14001 Environmental Management Systems), as an SFI Lead Auditor for Forest Management, Procurement, and Chain of Custody, as an FSC Lead Auditor Forest Management and Chain of Custody, as a Tree Farm Group Certification Lead Auditor, and as a GHG Lead Auditor. Mike has led Sustainable Forest Initiative (SFI) certification and precertification reviews throughout the United States. He has also led or participated in joint SFI and Forest Stewardship Council (FSC) certification projects in nearly one dozen states and a joint scoping or precertification gap-analysis project on tribal lands throughout the United States. He also co-led the pioneering pilot dual evaluation of the Lakeview Stewardship Unit on the Fremont-Winema National Forest.</p> <p>Mike Ferrucci has 30 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 30 states. Mike has been a member of the Society of American Foresters for over 30 years. 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, operations, professional forest ethics, private forestry, and financial analysis.</p>			

1.2 Total Time Spent on Evaluation

A. Number of days spent on-site assessing the applicant:	3
B. Number of auditors participating in on-site evaluation:	2
C. Additional days spent on preparation, stakeholder consultation, and post-site follow-up:	1.5

D. Total number of person days used in evaluation:	7.5
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1.3 Standards Employed

1.3.1. Applicable FSC-Accredited Standards

Title	Version	Date of Finalization
FSC-US Forest Management Standard	V1-0	July 8, 2010
SCS FSC Chain of Custody Indicators for Forest Management Enterprises	V2-1	November, 2010
All standards employed are available on the websites of FSC International (www.fsc.org), the FSC-US (www.fscus.org) or the SCS Forest Conservation Program homepage (www.scs-certified.com/forestry). Standards are also available, upon request, from Scientific Certification Systems (www.scs-certified.com).		

2.0 ANNUAL AUDIT DATES AND ACTIVITIES

2.1 Annual Audit Itinerary and Activities

Date: April 22, 2013	
FMU/Location/ sites visited	Activities/ notes
Grantsville MD	Team traveled to Maryland
	Opening meeting for Management
Date: April 23, 2013	
FMU/Location/ sites visited	Activities/ notes
Potomac-Garrett State Forest	<p>Lostland Run Road Rehabilitation Project: Completed road maintenance project funded through a National Recreation Trail Grant (\$30,000 projects with 1-2 grants/year). Replaced 26 cross-drain culverts; the audit team observed ~ 10 of these replacements as well as associated grading and resurfacing on 2,000 lineal feet of a 3.5-mile section of road. Designed and installed stone headwalls and tail walls. Additional work to replace culverts in active streams has not yet been completed; this work requires detailed permit applications and a 3-6 month permit approval process through Maryland Department of the Environment. One ID team member expressed concerns about non-native invasive plants appearing following any roadwork efforts. See OBS 2013.1</p> <p>Wallman PG-02-12: 10-acre crop-tree release completed in cooperation with a firewood contract with a program for handicapped workers (Community Action Program). Access database query used to identify eligible stands for this treatment. Harvest operation in progress.</p>

	<p>Wallman Invasive Species Control Project and Inventory, Compartments 21-26, Potomac State Forest, FY 2012 Annual Work Plan: Third year of a 5-7 multi-year backpack application of Glyphosate to control Garlic Mustard (<i>Alliaria petiolata</i>). Project focused on roadsides and drainage areas with some work on slopes. Treatments are reasonably effective however follow-up monitoring and treatment is necessary. One ID team member describes this need to “pick your battles”. Because of the nearby weed-free ESA and HCVF communities, this program is worth the effort. Weed-free ESA and HCVF associated with the North Branch of the Potomac River include management for unique species and communities.</p> <p>Kindness Demonstration Area (a): 8.5-acre overstory removal as a second-stage shelterwood that was completed during early spring 2013. The preparatory cut/thinning in 2004 helped recruit regeneration. Post-harvest area includes advanced regeneration and retention.</p> <p>Kindness Demonstration Area (b): 6.5-acre first cut of shelterwood system. Thinned from below to 70% stocking per SILVAH Oak specifications. Half of area also included understory treatment to cut and treat saplings. Residual stand consists of closely-spaced but undamaged large trees; excellent logging job.</p> <p>Brier Ridge, Stand A, FY 2012 Annual Work Plan: 47-acre Allegheny hardwood stand marked and sold but uncut. Fern control applications completed August 2012. Prescription is described as a seed cut with a goal of reducing the basal area by one-third. Trees marked for removal.</p> <p>Cranesville Road, Compartment 39B, FY 2012 Annual Work Plan: Completed 16-acre final overstory removal within 2 stands: 11-acre mixed oak/maple and 5-acre Allegheny hardwoods. Retention of cherry, oaks, LWD and a few snags; most snags and potential snags were removed during the previous treatment (1996) prior to certification. Forested buffer on roadside. One ID team member expressed a desire to see more dispersed and grouped retention in the future for wildlife habitat, though the work here was in fact carried out in accordance with the retention objective stated in the Approved Annual Work Plan and as reviewed by the ID team; as well as the Forest Service Policy for Forest Retention Policy as noted in the Sustainable Forest Management Plans section 5.7.7 Green Tree Retention. Slash managed to minimize deer browse including not</p>
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	<p>lopping tops. Main stem skid roads are clear however the smaller skid roads/trails have brush on them, preventing erosion. BMPs are in place and protection of adjacent watercourses and HCVF.</p> <p>Swallow Falls Road, Compartment 39A, FY 2012 Annual Work Plan: 22-acre final overstory removal with retention of islands and scattered oaks and snags. Completed spring 2013. Treatment includes the installation of deer fencing. Fencing is pulled tight and base is slightly buried. Supplemental planting of oak seedlings to augment natural regeneration. Deer fencing is monitored monthly.</p> <p>Handicapped Hunter Area, Compartment 33B, FY 2012 Annual Work Plan: Completed 9-acre final overstory removal with dispersed retention in Allegheny hardwoods. Completed 10-acre oak thinning from below.</p>
<p>Date: April 24, 2013</p>	
<p>FMU/Location/ sites visited</p>	<p>Activities/ notes</p>
<p>Green Ridge State Forest</p>	<p>Dughill Road/GR-06-12: 18- acre variable retention harvest in 95-year old mixed oak stand. Completed late summer 2012. Retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals and within large island ravine that is connected to HCVF. Marked to retain. Monitoring inspection completed weekly and at close of sale.</p> <p>Oldtown Orleans Road Salvage/GR-01-13: 38-acre variable retention harvest in 106-year old mixed oak stand. Overstory mortality approaches 100% resulting from Memorial Day 2011 hail storm. Snags and cavity trees and occasional live retention marked for retention (pine and oak). By contract retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals. Regeneration was damaged by hail as well as overstory. Silvah OAK will be used to check regeneration following salvage. Routine/informal drive-by checks on regeneration are also used for sites like this that present difficult situations. DNR staff aware of potential issues. Some of the smaller dbh trees are producing epicormic sprouts and may stump sprout following harvest. Harvest plans were expedited through the review process including all review steps. To be harvested during 2013. DNR staff aware of potential issues that may result from the presence of non-native invasive plants. Adjacent private inholding owner contacted.</p> <p>East Valley Road/GR-07-10. Access via closed ORV Trail. Timber</p>

	<p>Harvest operator improved access to landing (only). Marked and contracted pre-certification and harvested during summer 2012. Retention may be somewhat less than currently prescribed by DNR staff in post-certification sites however retention meets FSC requirements. Retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals and within 1 large island ravine and 2 other large islands. Stakeholder/Citizens Advisory Committee question about availability of LWD. Concern which was satisfied when large quantities of LWD were observed within large islands of retention. Access road beyond this harvest operation includes exposed bedrock, water routinely carried in road bed, eroded tracks and non-functional plugged culverts. See OBS 2013.1</p> <p>(Lunch at recreation picnic area including description of ARSWMA) Anthony's Ridge Special Wildlife Management Area (~900 acres) and 1 of 3 special habitat areas. Currently a 100-year old matrix. Treatments for special species designed to maximize habitat (e.g. Golden Winged Warbler) based on BMPs for these species and including for example 10-acre regeneration harvests with residual stems. This is a focal area for GWW in MD. Plan completed February 2013 with cooperation from multiple partners. Practices implemented and on schedule.</p> <p>Oldtown Orleans Road/GR-01-10: 120-acre mixed oak and yellow poplar TSI initially marked and contracted pre-certification and remarked (2012) following ice damage and subsequent mortality. Currently being harvested with state of the art cut-to-length system. Operator interviewed by auditors. Operator well-trained and site routinely inspected by DNR staff.</p> <p>(Mike Ferrucci left to travel to other eastern MD DNR sites; see SFI report for more details)</p> <p>Green Ridge Road/GR-05-12: 27-acre variable retention harvest (oak, hickory, white pine flowering dogwood and serviceberry) with adequate oak regeneration. Marked to retain. Completed during fall 2012. Large block of retention surrounds SMZ and separates treatment area into 2 blocks. Snags and den trees retained. Non-native invasive plants not observed.</p> <p>Francis O Zumbrun Overlook: Vista and platform located at the intersection of the Green Ridge Mountain Bike Trail Loop and the</p>
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	Great Eastern Trail and easily accessible roadside by car. Excellent opportunity for a variety of recreational user groups.
Date: April 25, 2013	
FMU/Location/ sites visited	Activities/ notes
Savage River State Forest	<p>East Shale Road ORV Trail (trail work): Current trail is located partially on private land and a new design will re-route the trail to avoid private land. The culvert maintenance permit process is complete and will be funded by the capital maintenance budget plus recreation funds. Some of the existing trail section will be blocked off following the redesign and rerouting process. Several side trails already blocked/closed with large boulders (observed during field visit). Some trail sections are already improved (stone dressing, 7 new culverts) with the use of \$30,000 recreation grant. One 24" culvert observed including stoned opening. Culvert size determined as part of permit process based on watershed size. Broad base dips along road. Stakeholder/trail user mentioned that this Trail is already much improved from previous condition.</p> <p>Posey Row Sale (in progress)/SR-02-12: Operator=Jacob Yoder. 7-acre salvage within 14-acre stand that is landlocked and operated by adjacent Amish operator. Mortality ~ 100% (2007 gypsy moth followed by ice storm) with adequate RO regeneration. No retention designated within this 1st 7-acre contract located on stony silt loam that is well-drained. SI= 75-85. Road work completed by operator.</p> <p>Bowman Hill Sale/SR-01-12 (in progress): Operator is a Master Logger; recent training includes BMPs, CPR and first aid. Top dressing stones completed by operator. Recent acquisition of 90-year old stand that includes 2-age characteristics located on stony silt loam. SI=75. Designed as a commercial thinning to remove mature and defective trees and thin remaining stand. Stump spots missing (or not obvious) on some cut and uncut cherry and RO stems. Some large oak and cherry stems have been marked to be removed while lower quality RM retained. While this is not a regeneration harvest, the removal of potential legacy and important seed resources in a region that struggles with RO regeneration may limit future retention options regeneration success. The ineffective use of stump spots may limit this FME's control of silvicultural prescriptions. Monitoring by local forestry staff or by the internal monitoring system did not document this situation. Excellent stump spots and prescription implementation observed at previous and</p>

	<p>subsequent sites lead auditor to conclude that the issues observed/described at Bowman Hill are an anomaly. See OBS 2013.2</p> <p>Road work completed by DNR Maintenance staff: Head wall/tail wall maintenance completed with SF budget on 3 locations within this stretch of road. Lunch in vans at this site.</p> <p>16-acre Norway spruce sanitation (near mountain bike trail). Mortality from a lightning strike attracted beetle infestation and patches of mortality. Excellent response. Prescribed as a salvage plus thinning. May plant native WP in the future. Excellent use of signage for the public.</p> <p>Elk Lick Campsites: Site observations in reaction to stakeholder comments about the lack of sanitary facilities, removal of CWD from stream sides, littering, campsite locations too close to water bodies. DNR management and staff pointed out rules and regulation signs at each campsite, routine DNR surveillance of campsites at these low-use sites. These sites are routinely used by recreational vehicles that bring their own portable facilities, DNR conversations about resting or retiring some sites in the future. Most sites are not a problem Campsites located along Big Run have more use and more issues. The most recently created campsites were built 4-6 years ago.</p> <p>Russell Road Sale/SR-01-11 (in progress): 160-acre salvage (2006/2007 Gypsy moth followed by ice damage) with retention of live stems along seeps/streams. Minimal live oak or future seed sources. Some advanced oak regeneration. Salvage operation to be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration. Prescribed fire will begin upslope of the salvage in the nearly adjacent sand meadows/barren (RSA) and travel through most of this salvage area to a skid road lower on the slope and stopping before an old growth stand (HCVF). Salvage operation supports industry that is still interested in this material 6-7 years following defoliation. Prescribed fire minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community. Black bear observed at base of slope. Excellent example of research and cooperation with Heritage, TNC and others for assistance with a prescribed fire prescription of this size.</p> <p>Bradford Historic Trail/Proposed location of St. John's Rock ORV</p>
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	<p>Trail: Met with stakeholder and smaller group of DNR management and staff (4-7 pm). This MD DNR trail proposal is still in the very early stages and has yet to go through design and comment phases. Stakeholder showed DNR staff areas of concern and resources that require protection that are not compatible with wheeled trail access. Foot traffic is compatible with the historic trail resources.</p>
<p>Chesapeake and Pocomoke Forests</p>	<p>WR45 - Foster Estate: 59-acre first thinning completed by trained timber harvest operator. Confirmed methods to determine stocking, review of special sites by ID Team, and that sale layout included marking of stand boundary and any wetlands or special site boundaries. Good-quality residuals retained with no residual damage, no soil damage and good utilization.</p> <p>Sturges Creek: Active harvest, Forest Friendly Logging: Interviewed timber harvest operator, confirmed CoC provisions, pre-harvest checklist and twice-weekly site inspections by Parker Forestry (consultants for Maryland), training, safety program and First Aid kits, spill kit, and knowledge of important vegetation to protect including residual stand and “fuzzy” (uncommon) pine trees.</p> <p>WR24 - Johnson & Johnson: 19-acre shelterwood part of a 900-acre 1967-origin Loblolly Pine plantation. Completed in the fall of 2012 and includes very minimal rutting and little soil disturbance. Local foresters are concerned about not getting enough soil disturbance, mixing and compaction that would provide best conditions for regenerating Loblolly pine.</p> <p>P06 – Hudson Active harvest, Blades Road, Pocomoke State Forest: 27-acre active overstory removal with significant retention (11 acres) in a 44-year old Loblolly pine plantation. Timber harvest operator Beauchamp was not working during visit (not related to weather). Excellent retention, including both islands and dispersed retention; islands are clustered around features or important retention species (oak, Pond pine). Excellent protection of trail corridor and old home site. Utilization and sale supervision notes are complete.</p> <p>WR37 – Trader: Standard second thinning to 71 square feet of basal area per acre. May be thinning again in 10 years, but plans for the Delmarva Fox Squirrel zone are being discussed and may change the approach across the forest.</p> <p>W46 – Campbell, Wicomico Demonstration Forest: First thinning in a</p>

	dense stand using a series of strip openings. The portion of the stand that had been thinned previously is of higher quality. Challenging project with good results.
Date: April 30, 2013	
FMU/Location/ sites visited	Activities/ notes
By phone with Annapolis Office Management and Representatives from individual regions and State forests.	Closing Meeting: discussion of preliminary findings, next steps, re-certification audit scheduled for April 2014, questions and answers.

3.0 CHANGES IN MANAGEMENT PRACTICES

There were no significant changes in the management and/or harvesting methods that affect the FME’s conformance to the FSC standards and policies.

4.0 RESULTS OF THE EVALUATION

4.1 Existing Corrective Action Requests and Observations

Finding Number: 2012.1	
Select one: <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	FSC-US Forest Management Standard, Section 5.6.c
Non-Conformity:	
<p>Stands that have been depleted or rendered to be below productive potential due to natural events are not returned to desired composition at the earliest practicable time as justified in management objectives.</p> <p>As a result of the high mortality and low residual live basal area, these salvaged stands are currently stocked at levels that are below productive potential due to natural events. There is an opportunity to improve MD DNRs salvage process for example by considering practices that combine some of the heavily damaged salvage operations (removal of dead and dying material) with a regeneration harvest (removal of some of the live red maple and black gum) for example as observed in SR-09-09 and SR-02-10 while considering DNR’s retention guidelines in an attempt to more quickly move the damaged stands toward a more desirable species composition.</p> <p>Evidence: SR-09-09 and SR-02-10. These stands were salvaged before these acres were certified.</p>	
Corrective Action Request:	

<p>MD DNR should consider practices that combine some of the heavily damaged salvage operations (removal of dead and dying material) with a regeneration harvest (removal of some of the live red maple and black gum) while considering DNR’s retention guidelines in an attempt to more quickly move the damaged stands toward a more desirable species composition and to improve MD DNR’s compliance with this section of the Standard.</p>	
<p>FME response <i>(including any evidence submitted)</i></p>	
<p>SCS review</p>	<p>Current salvage harvest projects including for example GR-01-13; SR-02-12 and SR-01-11. GR-01-13 do an excellent job of combining the prescription for the removal of dead and dying material with components more common to a regeneration harvest (removal of some of low quality live overstory red maple and black gum for example) while considering and implementing MD DNR’s retention guidelines. These practices successfully quickly move the newly regenerated stands toward a more desirable species composition.</p>
<p>Status of CAR:</p>	<p><input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)</p>

Finding Number: 2012.2	
<p>Select one: <input checked="" type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input type="checkbox"/> Observation</p>	
<p>FMU CAR/OBS issued to (when more than one FMU): State Office – relates to state forests in the western region</p>	
<p>Deadline</p>	<p><input type="checkbox"/> Pre-condition to certification <input checked="" type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):</p>
<p>FSC Indicator:</p>	<p>FSC-US Forest Management Standard, Section 5.6.d</p>
<p>Non-Conformity:</p> <p>Minor CAR 2011.5 has been upgraded to Major CAR 2012.2</p> <p>The forest owner or manager has not utilized available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.</p> <p>Evidence: Based on interviews with DNR staff, harvest levels have not yet been set.</p>	
<p>Corrective Action Request:</p> <p>The forest owner or manager must utilize available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber</p>	

growing stocks or other adverse effects to the forest ecosystem.	
<p>FME response <i>(including any evidence submitted)</i></p>	<p>Text response from FMU copied from email:</p> <p><i>I have read the two papers by Marla McIntosh and as you have pointed out, they do not attempt to document ginseng populations. There is a reference to NatureServe on the topic but it only states what has been said so many times already. During today's conversation with the MD State Botanist, he agrees, there simply is no good population data for our state.</i></p> <p><i>Below is a reference to a conference held in 2003 on recommendations for a ginseng conservation policy (short of closing the harvest season). There are three recommendations: 1) move back the harvest season, 2) deny harvesting of plants less than 5-years old, and 3) require planting of seeds near the source of the harvested plants.</i></p> <p><i>The MD Dept of Ag permit and policy requires all three (see below).</i> http://www.mda.state.md.us/pdf/sang-col.pdf</p> <p><i>An earlier communication from the MDA agent states that while some more analysis can be done (and is) it seems that the harvest levels over the past 30 years has been stable. Natural Heritage Program is working on this analysis, expected in June. Also, that some pressures from illegal early harvesting may be eliminated since Pennsylvania's ginseng season now coincides with that of WV and MD.</i></p> <p><i>Today, I had a long conversation with the State Botanist on this issue. He agreed, that without good scientific population data it is very unlikely that DNR would support a harvest limit or the concept to eliminate harvest in conservation zones. He couldn't even get the harvest moratorium past his unit director on Wildlife Management Areas. Even WV, that is supposed to have some of the best inventory data out there, the data is scant at best.</i></p> <p><i>We have agreed to continue the process and the dialog (which would not have happened to degree it has without the CAR), but not sure where to take this from here.</i></p> <p>Implemented actions as of 10/16/1:</p> <p>One change instituted during this audit cycle. In order for harvesters to collect on a State Forest, each collector must check-in at the State Forest. This information will give MD DNR a better handle on how much collecting occurs on State Forests. MD DNR intends to continue to monitor permit numbers. During this past 2011</p>

	<p>harvest season MD DNR issued the following permits: Green Ridge = 3 permits; Savage River = 28 permits; Potomac-Garrett = 8 permits.</p> <p>Additionally, work has continued through a study and subsequent paper by the MD Natural Heritage program, lead by Chris Frye, State Botanist, MD DNR Wildlife and Heritage Service. The paper outlined a two-pronged approach. The first part was a review of 30-years of ginseng licenses and harvest reports provided by the MD Department of Agriculture (responsible for licensing and reporting ginseng harvest). The second part of the paper reported on a systematic survey for ginseng in Maryland over four weeks from May 24-June 21, 2012. The Action Summary of the paper stated for ginseng (<i>Panax quinquefolius</i>): Upgrade state rank to S2-S3 commensurate with reduced viability of populations and increased threats from harvest and deer browse. Recommend closure of state wildlife management areas and state forests to American ginseng harvest.</p> <p>A final decision on the status of this CAR will be made at a later date following review by DNR</p> <p>March 2013: Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits had been issued through the fall of 2012, MD DNR’s Secretary developed a policy (Ginseng Harvest Prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands. The policy was effective immediately.</p>
<p>SCS review</p>	<p>MD DNR has put extensive work and research into addressing the issues underlying this Major CAR. MD DNR is reaching the final stage of the process, which will entail a full review by DNR and a final decision on how to best manage the harvest. Given that the current ginseng harvest season is ongoing and a full DNR review of the issue cannot be completed until after the harvest season, closure of this CAR has been extended for one three month period. The final date by which evidence to ensure closure is due is January 26th, 2013.</p> <p>1/25/13: MD DNR has submitted a “Plan Element Decision Form” which provides a summary of recent research on wild ginseng population distribution and health, regulatory actions taken to regulate the harvest of ginseng and a history of ginseng harvests and impact on wild population levels. The document concludes that the recommended course of action is to upgrade the state listing of ginseng from S3 to S2S3 and recommends the closure of ginseng harvests on state lands.</p>

	<p>Although a final decision has not yet been made regarding the recommendations and implementation of the decision has not yet taken effect, the recommendations have been made based on a thorough analysis of current and historic wild ginseng population and harvest levels, which adequately meets the intent of the CAR. Further review of this issue will take place at subsequent audits to ensure MD DNR is moving forward with a decision and implementing any new rules for ginseng harvesting.</p> <p>4/30/13: Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits had been issued through the fall of 2012, MD DNR's Secretary developed a policy (Ginseng Harvest Prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands. The policy was effective immediately and effectively protects the non-timber growing stock of this species on state land in Maryland.</p>
Status of CAR:	<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

Finding Number: 2012.3	
Select one: <input type="checkbox"/> Major CAR <input checked="" type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	FSC-US Forest Management Standard, Section 6.2.b
Non-Conformity:	
<p>When RTE species are present or assumed to be present, modifications in management have not always been made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats.</p> <p>Evidence: Modifications in management have not been presented in order to maintain, restore or enhance the maintenance or protection of one S3 and CITES-listed species, American ginseng. In the case of other RTE species, adequate protection measures have been established.</p>	
Corrective Action Request:	
<p>When RTE species are present or assumed to be present, modifications in management must be made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats. Conservation measures must be based on relevant science, guidelines and/or consultation with relevant, independent experts as necessary to achieve the conservation goal of the Indicator.</p>	

FME response <i>(including any evidence submitted)</i>	Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits had been issued through the fall of 2011, MD DNR's Secretary developed a policy (Ginseng Harvest Prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands.
SCS review	Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits had been issued through the fall of 2012, MD DNR's Secretary developed a policy (Ginseng Harvest Prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands. The policy was effective immediately and represents a modification in management to protect this RTE species.
Status of CAR:	<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

Finding Number: 2012.4	
Select one: <input checked="" type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU): State Office – relates to state forests in the western region	
Deadline	<input type="checkbox"/> Pre-condition to certification <input checked="" type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	FSC-US Forest Management Standard, Section 6.6a
Non-Conformity: Products on the FSC list of Highly Hazardous Pesticides have been used (see FSC-POL-30-001 EN FSC Pesticides policy 2005 and associated documents). MD DNR applied Weeddestroyer AM-40 Amine Salt, the active ingredient of which is 2-4-d, to control weeds around campsites and an overlook. 2-4-d is on the FSC list of Highly Hazardous Pesticides and as such its use is prohibited. This certificate holder does not hold a derogation for the use of this chemical.	
Corrective Action Request: Submit to SCS evidence that MD DNR has ceased the use of 2,4-D.	
FME response <i>(including any evidence submitted)</i>	The FME representative contacted the forest manager and sent the FSC policy to all the state forest managers to provide insight to what has happened. Also directed the state forest manager to immediately cease use of the chemical in question and to remove it from their premises. He has stated that he understands that use is to cease immediately and will remove the chemical from the premises within the week. He was under the assumption that their use of this chemical was

	exempted and was assured that this was not the case and this was a misunderstanding.
SCS review	Based on this email communication from MD DNR that includes adequate evidence that this manager has ceased use of 2,4-d, the auditor closed this CAR. MD DNR will research other chemicals to use for these control situations. MD DNR does not intend to file for a derogation.
Status of CAR:	<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

4.2 New Corrective Action Requests and Observations

Finding Number: 2013.1	
Select one: <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator(s):	US Forest Management Standard Indicator 6.5.d
Non-Conformity (or Background/ Justification in the case of Observations): This FME does a good job with the transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings and has made real progress in its efforts to maintained, and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects. However, recently scheduled maintenance efforts (that require permits from another state agency) have been delayed and work to replace culverts in active streams has not yet been completed on schedule because maintenance activities on live streams requires detailed permit applications including a 3-6 month permit approval process through Maryland Department of the Environment. Permit application and review is causing maintenance delays (that are beyond the control of MD DNR) even though funding is in place to pay for repair work. In some cases other maintenance repairs that do not require permitting on nearby section of some of these same roads have been completed.	
Corrective Action Request (or Observation): The FME should consider investigating an expedited method to facilitate the permit application and review process in an attempt to maintain the transportation system.	
FME response (including any evidence submitted)	
SCS review	

Status of CAR:	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)
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Finding Number: 2013.2	
Select one: <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator(s):	US Forest Management Standard Indicator 8.2.d.1
Non-Conformity (or Background/ Justification in the case of Observations): Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective. However, monitoring by local forestry staff or by the internal silvicultural audit system did not document one case where harvest prescriptions and guidelines may not be effective. Excellent stump spots and prescription implementation observed at previous and subsequent sites lead auditors to conclude that the issues observed and described at Bowman Hill are an anomaly.	
Corrective Action Request (or Observation): This FME should consider reviewing its internal silvicultural audit protocol to ensure consistent conformance with this indicator.	
FME response (including any evidence submitted)	
SCS review	
Status of CAR:	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

5.0 STAKEHOLDER COMMENTS

In accordance with SCS protocols, consultation with key stakeholders is an integral component of the evaluation process. Stakeholder consultation takes place prior to, concurrent with, and following field evaluations. Distinct purposes of such consultation include:

1. To solicit input from affected parties as to the strengths and weaknesses of the FME’s management, relative to the standard, and the nature of the interaction between the company and the surrounding communities.
2. To solicit input on whether the forest management operation has consulted with stakeholders regarding identifying any high conservation value forests (HCVFs).

Principal stakeholder groups are identified based upon results from the pre-evaluation (if one was conducted), lists of stakeholders from the FME under evaluation, and additional stakeholder contacts from other sources (e.g., chair of the regional FSC working group). The following types of groups and individuals were determined to be principal stakeholders in this evaluation:

5.1 Stakeholder Groups Consulted

FME Management and staff	Citizens Advisory Group members
consulting foresters	Regionally-based environmental organizations
contractors	State regulatory agency personnel
recreational users	
purchasers of logs harvested on FME forestlands	

Stakeholder consultation activities are organized to give participants the opportunity to provide comments according to general categories of interest based on the three FSC chambers, as well as the SCS Interim Standard, if one was used. The table below summarizes the major comments received from stakeholders and the assessment team’s response. Where a stakeholder comment has triggered a subsequent investigation during the evaluation, the corresponding follow-up action and conclusions from SCS are noted below.

5.2 Summary of Stakeholder Comments and Responses from the Team, Where Applicable

FME has not received any stakeholder comments from interested parties as a result of stakeholder outreach activities during this annual audit.		<input type="checkbox"/>
Stakeholder comments	SCS Response	
Economic concerns		
None received.		
Social concerns		
Proposed ORV trail on Big Savage may impact an historic trail (Braddock’s Road) as well as archeological resources, documented location of rare species and has not been reviewed by stakeholders.	Due to the nature of comments received this year regarding the location of this proposed ORV trail, the auditor contacted and met with one stakeholder in association with this issue during the 2013 audit.	
An outside firm has been hired in conjunction with the National Mountain Bike Association to create 20 miles of new trails in Garrett/Potomac State Forest. Other extensive trails near PGSF are underused. This trail location has not been reviewed	Information collected during the audit confirmed that this proposed trail location is in the very early stages of location, design, public comment and review processes. MD DNR requested comment from Maryland Historical Trust in association with the known nearby archeological resources. MD DNR reviewed this site with MD NHP. Current ideas include the plan to limit trail use to a limited number of permits issued for only weekends. As in the past, MD DNR is willing and able to close any/all ORV trails when necessary. MD DNR management and staff also met with this one stakeholder during this audit program on site to review concerns. MD DNR continues to implement its thorough public comment	

<p>by stakeholders.</p>	<p>and review process which has not yet been initiated at this very early stage of these trail proposals. No non-conformance is warranted.</p>
<p>Proposed ORV trail on Sidling Hill has not been reviewed by stakeholders and is located in a remote roadless area of this county.</p>	<p>The Sidling Hill ORV trail is not located on MD DNR land.</p>
<p>Environmental concerns</p>	
<p>State Forest roadside campsites are a major public health issue due to the lack of restroom facilities ... the entire area is covered with toilet paper.... most of these campsites are relatively new. Many of the campsites are linear along a long stretch of creeks (in SRSF: Big Run, Elk Lick, Poplar Lick, Savage River, etc.) ... campsites are extensively used and the human feces just piles up ... campsites are in part responsible for extensive removal of CWD along native brook trout streams. Some of these streams have state endangered water shrews ... CWD is essential to the aquatic ecosystem</p>	<p>Due to the nature of comments received this year regarding the roadside camp sites, the auditor contacted and met with one stakeholder in association with this issue during the 2013 audit and added a spontaneous stop at a roadside camping area to review the conditions.</p> <p>MD DNR reviews and considers closing, resting, retiring roadside campsites. The construction of composting facilities has been considered in the past. Most use of these sites is by RVs that have their own facilities. Rules and regulations (including the prohibition of littering and removal of living vegetation) are posted at each site. Campsites are routinely visited by MD DNR staff and Natural Resource Police; past offenses have been noted and resolved. New campsites have not been created for at least 5 years. A roadside campsite located in SRSF was spontaneously added to the audit agenda and visited during this 2013 audit program; littering or excessive removal of CWD are not issues at this site. CWD levels in the stream and near this campsite is somewhat low however the recent October 2012 storm deposited an observed pulse of CWD throughout western Maryland including these state forests, rivers, streams and associated riparian areas. No non-conformance is warranted.</p>
<p>More attention needs to be given to the invasive species issue throughout all state forests.</p>	<p>MD DNR presented a number of control projects for review during this 2013 audit; like every landowner who recognizes the importance of controlling non-native invasive plants, MD DNR continues to struggle with this issue and actively pursued ~ 180 acres of control treatments.</p> <p>MD DNR recently implemented a state-wide Early Detection & Rapid Response Plan which includes the following excerpt: "This plan is designed to provide timely identification and effective treatment</p>

	<p>of small (<1/4 Acre) outbreaks of invasive species on State Lands. The intent is to take a proactive approach for the protection of native community types in the forest”. MD DNR is in the middle of its 5-year forest inventory project and the presence of invasive plants is one of the features included in the forest inventory (SILVAH Oak); invasive plants are also noted and monitored during routine project planning and timber sale inspection reports. Special invasive treatment projects are documented in Annual Work Plans. In addition, the 2011 MD legislature authorized the establishment of an Invasive Plant Advisory committee that develops and ranks invasive plants. MD DNR developed two research projects in cooperation with the MD Wildlife and Heritage Service. The first project included GRSF and determined how often common invasive species occurred, describes regional patterns and concluded that levels of invasion are not as severe as documented levels in other parts of the state. The second project focuses on the presence of invasive plants in ESAs and has selected a section of CSF as a study site.</p> <p>MD DNR is working with their Natural Heritage Program to develop exotic/invasive plant species Best Management Practices guidelines. In addition, research discussions with harvest operators regarding the effective and efficient use of power washing equipment before harvest machinery enters a State Forest harvest area has been initiated and has not met with resistance. The details of this practice are still being developed. MD DNR is reviewing 2 management practice programs that were developed elsewhere (NY TNC & WI) with consideration of adapting the practices to the MD DNR system.</p> <p>For example, a recent April 2011 treatment and October 2012 follow-up of Garlic Mustard (<i>Alliaria petiolata</i>) Control Project - Wallman/Laurel Run and the Japanese Knotweed (<i>Polygonum cuspidatum</i>) Control project - Compartment 5 Backbone Mountain (both at Potomac Garrett State Forest) include ground spraying in designated areas, follow-up monitoring and re-treatment as necessary. In the example of the Wallman Invasive Species Control Project, Compartments 21-26, this is the 3rd year of a 5-7 multi-year backpack application of Glyphosate to control Garlic Mustard with specific focus on roadsides and drainage areas with some work on slopes. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary. One ID team member describes this need to “pick your battles” and this is a</p>
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	<p>battle worth fighting due to the nearby weed-free ESA and HCVF communities. In another 2012 example on the SRSF, MD DNR staff demonstrated its ability to implement an early detection and rapid response in an impressive efforts to treat and prevent the spread of the newly discovered yellow archangel (<i>Lamiastrum galeobdolon</i>). This example confirms a high level of coordination among field ID teams, a proactive approach to invasive plant species control and an exceptional ability to quickly treat the area.</p> <p>The MD DNR Natural Heritage Program is responsible for most of the monitoring of control measures and the State Forests represent the major locations for their suppression projects. MD DNR is currently reviewing a management practice program that was developed by NY TNC and is considering adapting the practice to the MD DNR system.</p> <p>Finally, MD DNR is in the middle of its 5-year forest inventory project and the presence of invasive plants is one of the features included in the forest inventory process; invasive plants are also noted and monitored during routine project planning and timber sale inspection reports. As an example, of one of the many control projects reviewed during the 2013 audit, this is the 3rd year of a 5-7 multi-year backpack application of Glyphosate within the Garlic Mustard Control Project - Wallman/Laurel Run, Potomac Garrett State Forest. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary and has been implemented. No non-conformance is warranted.</p>
<p>Cooperation between MD DNR and trail users is appreciated. The East Shale Road trail has been vastly improved. This trail used to be almost impassable by mountain bike.</p>	<p>Comment noted.</p>
<p>Has seen unregistered ORVs on the East Shale Road trail.</p>	<p>Each State Forest works closely with Natural Resource Police officers as confirmed through interviews. The Natural Resource Police routinely monitor the forest for illegal ORV use and other illegal activities. ORV trails have been closed state-wide in response to a 2011 CAR. For example, SRSF closed one ORV trail for environmental reasons and is working with MD DNR's ORV stakeholder group to examine alternative locations for ORV trails.</p> <p>Signage including for example signage observed at various locations within GRSF, SRSF, PSF and CSF, interviews with Natural Resource Police who enforce MD DNR regulations, public</p>

	<p>information on the agency website and other locations and permanent trail closures are being used effectively to curtail unauthorized ORV activity and associated resource damage</p> <p>Roads and trails are routinely patrolled by MD DNR staff and Natural Resource Police; past offenses have been noted and resolved. This trail is currently located partially on private land; the new design will re-route the trail to avoid private land. Some of the existing trail section will be blocked off following the redesign and rerouting process. Several side trails already blocked/closed with large boulders (observed during field visit). Current and scheduled trail maintenance activities combined with the use of signs, gates and other obstacles are used effectively to establish a presence and minimize illegal activities. No non-conformance is warranted.</p>
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6.0 CERTIFICATION DECISION

<p>The certificate holder has demonstrated continued overall conformance to the applicable Forest Stewardship standards. The SCS annual audit team recommends that the certificate be sustained, subject to subsequent annual audits and the FME’s response to any open CARs.</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Comments:</p>	

7.0 CHANGES IN CERTIFICATION SCOPE

There were no changes in the scope of the certification in the previous year.

Name and Contact Information

Organization name			
Contact person			
Address	Telephone		
	Fax	410-260-8595	
	e-mail		
	Website		

FSC Sales Information

FSC salesperson			
Address	Telephone		
	Fax	410-260-8595	
	e-mail		
	Website		

Scope of Certificate

Certificate Type	<input checked="" type="checkbox"/> Single FMU	<input type="checkbox"/> Multiple FMU
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	<input type="checkbox"/> Group	
SLIMF (if applicable)	<input type="checkbox"/> Small SLIMF certificate	<input type="checkbox"/> Low intensity SLIMF certificate
	<input type="checkbox"/> Group SLIMF certificate	
# Group Members (if applicable)		
Number of FMU's in scope of certificate		
Geographic location of non-SLIMF FMU(s)	Latitude & Longitude:	
Forest zone	<input type="checkbox"/> Boreal	<input type="checkbox"/> Temperate
	<input type="checkbox"/> Subtropical	<input type="checkbox"/> Tropical
Total forest area in scope of certificate which is:		Units: <input type="checkbox"/> ha or <input type="checkbox"/> ac
privately managed		
state managed		
community managed		
Number of FMUs in scope that are:		
less than 100 ha in area		100 - 1000 ha in area
1000 - 10 000 ha in area		more than 10 000 ha in area
Total forest area in scope of certificate which is included in FMUs that:		Units: <input type="checkbox"/> ha or <input type="checkbox"/> ac
are less than 100 ha in area		
are between 100 ha and 1000 ha in area		
meet the eligibility criteria as <i>low intensity</i> SLIMF FMUs		
Division of FMUs into manageable units:		

Production Forests

Timber Forest Products	Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac
Total area of production forest (i.e. forest from which timber may be harvested)	
Area of production forest classified as 'plantation'	0
Area of production forest regenerated primarily by replanting or by a combination of replanting and coppicing of the planted stems	
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	
Silvicultural system(s)	Area under type of management
Even-aged management	
Clearcut (clearcut size range)	
Shelterwood	

Other:	
Uneven-aged management	
Individual tree selection	
Group selection	
Other:	
<input type="checkbox"/> Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	
The sustainable rate of harvest (usually Annual Allowable Harvest or AAH where available) of commercial timber (m3 of round wood)	
Non-timber Forest Products (NTFPs)	
Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services	
Other areas managed for NTFPs or services	
Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type	
Explanation of the assumptions and reference to the data source upon which AAH and NTFP harvest rates estimates are based:	
Species in scope of joint FM/COC certificate: <i>Scientific/ Latin Name (Common/ Trade Name)</i>	

Conservation Areas

Total Area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives	115,659 ac			
High Conservation Value Forest/ Areas				
High Conservation Values present and respective areas: Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac				
	Code	HCV Type	Description & Location	Area
<input checked="" type="checkbox"/>	HCV1	Forests or areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	Ecologically Significant/Wildlands - Eastern region; Ecologically Significant/Wildlands - Western region	15,226 16,656
<input type="checkbox"/>	HCV2	Forests or areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.		
<input checked="" type="checkbox"/>	HCV3	Forests or areas that are in or contain rare, threatened or endangered	Core FIDs habitat; core DFS habitat – Eastern	18,484

		ecosystems.	region; old growth and old growth management – Western region	24,874
<input checked="" type="checkbox"/>	HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	Riparian Buffer Areas – Eastern region; Riparian Buffer Areas – Western region	38,274 2,145
<input type="checkbox"/>	HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).		
<input type="checkbox"/>	HCV6	Forests or areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).		
Total Area of forest classified as 'High Conservation Value Forest/ Area'				71,984

Areas Outside of the Scope of Certification (Partial Certification and Excision)

<input type="checkbox"/> N/A – All forestland owned or managed by the applicant is included in the scope.		
<input checked="" type="checkbox"/> Applicant owns and/or manages other FMUs not under evaluation.		
<input type="checkbox"/> Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification.		
Explanation for exclusion of FMUs and/or excision:	These small State Forests are not routinely managed. This FME has no interest in certifying these isolated acreages.	
Control measures to prevent mixing of certified and non-certified product (C8.3):	These State Forests are geographically separate from certified acreage. Little or no management occurs on these excluded acres (occasional salvage or demonstration).	
Description of FMUs excluded from or forested area excised from the scope of certification:		
Name of FMU or Stand	Location (city, state, country)	Size (<input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac)
Elk Neck State Forest	Northeast MD	3,380
Cedarville State Forest	Brandywine MD	3,625
Stoney Demonstration Forest	Aberdeen MD	318
Salem State Forest	Leonardtwn MD	837

8.0 ANNUAL DATA UPDATE

8.1 Social Information

Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):		
42 male workers	12 female workers	
Number of accidents in forest work since last audit	Serious: 0	Fatal: 0

8.2 Annual Summary of Pesticide and Other Chemical Use

FME does not use pesticides.

Commercial name of pesticide/ herbicide	Active ingredient	Quantity applied annually (kg or lbs)	Size of area treated during previous year	Reason for use
Accord	Glyphosate	139 lbs	44 acres	Fern & grass control
Arsenal AC	Imazapyr	33 lbs	33 acres	cut surface hardwood control
Garlon 3A + Chemsurf 90	Tryclopyr	19.1 gal	12.8 acres	Non-native invasive plant control
Garlon 4	Tryclopyr	65.25 gal	130.5 acres	Non-native invasive plant control
Garlon 4 Ultra	Tryclopyr	2 oz	10.5 acres	Rhododendron control
Gly 4 plus	Glyphosate	9.84 gal	26 acres	Non-native invasive plant & hardwood control
Oust	Sulfometuron	.77 gal	77 acres	Fern & grass control
Polaris	Imazapyr 27.7%	2.3 lbs	6 acres	Hardwood control
RazorPro + Arsenal	Glyphosate & Imazapyr	24 oz	1.5 acres	Non-native invasive plant control
RazorPro + Chemsurf 90	Glyphosate	1.5 oz	1/8 acre	Non-native invasive plant control
RazorPro + Garlon3A	Glyphosate & Tryclopyr	128 oz	8 acres	Non-native invasive plant control
Roundup Pro 53%	Glyphosate	8.6 lbs	6 acres	Hardwood control

SECTION B – APPENDICES (CONFIDENTIAL)

Appendix 1 – List of FMUs Selected For Evaluation

- FME consists of a single FMU
 FME consists of multiple FMUs or is a Group

Appendix 2 – Evaluation of Management Systems

The audit team conducted a brief opening meeting with administrative staff in Grantsville on the evening of the 22nd and then again with field representatives at the beginning of each field day. Both auditors conducted field visits in the western region on Tuesday and Wednesday then 1 auditor

continued to conduct field visits in the western region while the other auditor traveled to the eastern region and conducted 1 day of audits in the eastern region including brief opening meetings in the east and west with the relevant DNR staff and several Citizen Advisory Committee members. The audit team visited 5 of the 5 State Forests that are within the scope of the certificate. Specific sites to visit were selected in the western region by first selecting all sites that had been marked or operated since the previous 2012 audit. Almost all recent management activity sites were visited. Sites were selected in the eastern region by assigning randomly generated priority numbers to each timber sale since 2010. The highest ranked sales were selected to visit and then repetitive sites (sites with the same forest type or prescription) were exchanged to ensure that the audit included representative sample of the DNR's activities. In both regions spontaneous site visits were included en route and staff/stakeholder and/or contractor interviews were conducted at each site. Documents reviewed during this audit included management plans, policy and procedure documents, timber sale inspection forms, chemical use records, training records and other policies, procedures and records. Each audit team member was assigned a subset of the relevant indicators for this audit. During deliberation, the audit team used a consensus approach to determine whether or not there was conformance with each of the indicators being assessed during this audit program. The closing meeting was completed by phone with representatives of the State Office in Annapolis and representatives of individual regions and State Forests.

Appendix 3 – List of Stakeholders Consulted

List of FME Staff Consulted

Name	Title	Contact	Consultation method
Wesley Knapp	MD NHP		Field
Brent Stemple	DNR		Field
Robert Webster	DNR		Field, Meeting
Mark Beals	DNR		Field, Meeting
Mike Schofield	DNR		Field, Meeting
Jesse Morgan	DNR		Field, Meeting
Kip Powers	DNR		Email, Field, Meeting
Jack Perdue	DNR	jperdue@dnr.state.md.us	Email, Field, Phone, Meeting
Steve Koehn	DNR	skoehn@dnr.state.md.us	Email, Phone, Meeting
Alexander Clark	DNR		Field
Noah Rowe	DNR		Field, Meeting
Ed Thompson	MD NHP		Field
Scot Campbell	DNR		Field, Meeting
John Denning	DNR		Field, Meeting
Wade Dorsey	DNR		Email, Field, Phone, Meeting
Mike Johnson	DNR		Field, Meeting

Jeramie Foy	DNR		Field, Meeting
Roger Rouivds	DNR		Field, Meeting
Jason Savage	DNR		Field, Meeting
Bo Slinger	DNR		Field, Meeting
Kenneth Jolly	DNR		Field, Meeting
Anne Hairston-Stang	DNR		Field, Meeting
William DeMar	DNR		Field, Meeting
Lance Carroll	DNR		Field
Jackie Boylan	DNR		Meeting
Joyce Stoner	DNR		Meeting
Skip Jones	Parker Forestry		Field, Meeting
Stacey Esham	Parker Forestry		Field, Meeting
John Connors	Parker Forestry		Field, Meeting
Robert Feldt	DNR		Field, Meeting
Gary Adelhardt	DNR		Field, Meeting
Dave Murple	DNR/ Nat. Res. Police		Field, Meeting
Steve Carr	DNR		Field
Eric Null	DNR		Field
Pete Kelly	DNR		Field
Mark McMillth	DNR/Nat. Res. Police		Field
Bob Mayles	DNR/Nat. Res. Police		Field

List of other Stakeholders Consulted

Name/ Title	Organization	Contact	Consultation method
Dr. J. Edward Gates	Citizens Advisory Committee/Univ. of MD Center for Environment & Science		Field, Meeting
William Giese	Citizens Advisory Committee		Field
Arthur Egolf,	Citizens Advisory Committee/ Egolf Forest Harvesting, Inc,		Field

Sunshine Brosi	Citizen Advisory Committee/ Frostburg State University		Field, Meeting
Steve Green	Citizens Advisory Committee		Field, Meeting
Tony DiPaolo	Citizens Advisory Committee		Field
David Ray	TNC & Citizens Advisory Committee		Field
Chuck Hoffeditz	Citizens Advisory Committee		Field, Meeting
Robert Bantz	Stakeholder		Field, email, phone, meeting
Bonnie Friend	Citizen Advisory Committee		Field, Meeting
Joe Colmer	Timber Harvest Operator		Field, Meeting
Eddie Moore	Timber Harvest Operator		Field, Meeting
Todd Clark	Timber Harvest Operator		Field, Meeting

Appendix 4 – Additional Audit Techniques Employed

The audit team did not employ any additional audit techniques for this annual surveillance audit.

Appendix 5 – Pesticide Derogations

<input checked="" type="checkbox"/> There are no active pesticide derogations for this FME.

Appendix 6 – Detailed Observations

Evaluation Year	FSC P&C Reviewed
2009	All – (Re)certification Evaluation
2010	P.7 and P.9
2011	1.2; 1.5; 1.6; 2.1; 2.3; 3.2; 4.2; 4.4; 5.2; 5.5; 5.6; 6.1; 6.2; 6.3; 6.4; 6.6; 6.7; 6.8; 6.9; 7.1; 7.4; 8.2; 9.2; 9.4; 10.4; 10.6; 10.7; 10.8; 10.9
2012	1.5; 2.3; 3.2; 4.2; 4.4; 5.1; 5.3; 5.4; 5.6; 6.2; 6.3;

	6.5; 6.7; 6.9; 6.10; 8.2; 9.4; 10.1; 10.2; 10.3; 10.5; 10.6; 10.7; 10.8
2013	1.1; 1.3; 1.4; 1.5; 2.2; 2.3; 3.2; 3.3; 3.4; 4.1; 4.2; 4.3; 4.4; 4.5; 5.6; 6.5; 6.2; 6.3; 6.9; 8.1; 8.2; 8.3; 8.4; 9.4

C= Conformance with Criterion or Indicator

NC= Non-Conformance with Criterion or Indicator

NA = Not Applicable

NE = Not Evaluated

REQUIREMENT	C N C	COMMENT/CAR
P1 Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.		
C1.1 Forest management shall respect all national and local laws and administrative requirements.	C	
1.1.a. Forest management plans and operations demonstrate compliance with all applicable federal, state, county, municipal, and tribal laws, and administrative requirements (e.g., regulations). Violations, outstanding complaints or investigations are provided to the Certifying Body (CB) during the annual audit.	C	As confirmed during interviews with a variety of foresters and natural resource police and review of forest management plans and various management operations described elsewhere in this report, this FME meets the requirements of laws and regulations including for example those related to the protection of rare species, implementation of BMPs and SMZs. Violations or complaints have not been received.
1.1.b. To facilitate legal compliance, the forest owner or manager ensures that employees and contractors, commensurate with their responsibilities, are duly informed about applicable laws and regulations.	C	Foresters supervise a variety of management activities and ensure that operations comply with laws, regulations and BMPs. For example, foresters continue to require by contract that timber harvest operators meet OSHA and other logging safety requirements. Based on interviews with employees and timber harvest operators and review of training records, employees and contractors have received training and understand laws and regulations that apply to forest management activities including for example chemical use, best management practices and rare species protection.
C1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	C	
1.3.a. Forest management plans and operations comply with relevant provisions of all applicable binding international agreements.	C	During interviews, Jack Perdue confirmed that this FME is in conformance with applicable provisions of international agreements; the absence of violations or challenges has been accepted as evidence of conformance with this section of the standard. Few, if any, of the international agreements apply to management of MD DNR lands.
C1.4. Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.	C	
1.4.a. Situations in which	C	Based on interviews and documents reviewed, there are no known cases

<p>compliance with laws or regulations conflicts with compliance with FSC Principles, Criteria or Indicators are documented and referred to the CB.</p>		<p>where compliance with laws or regulations conflict with FSC principles, criteria or indicators.</p>
<p>C1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.</p>	<p>C</p>	
<p>1.5.a. The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the Forest Management Unit (FMU).</p>	<p>C</p>	<p>MD DNR cooperates with Natural Resource Police (NRP) to control unauthorized activity. Approximately 1/4 of the property boundaries are re-marked each year on a 4-year rotation; MD DNR recently received \$10,000 toward resolution of boundary location details. Property boundaries are current according to the marking schedule; landings and trails are gated after harvests as confirmed through observations at a variety of sites within GRSF, SRSF, CSF and PSF.</p> <p>Interviews with a variety of Natural Resource Police officers confirm that this agency is aware of the recent March 2013 MD DNR policy: "Ginseng: Harvest prohibition on State Lands" including anticipation of any 1st year issues with enforcement of the new policy. MD DNR intends to send an informational letter to collectors of American ginseng (<i>Panax quinquefolius</i>) to make collectors aware of this newly released policy and as a measure to prevent illegal collection.</p>
<p>1.5.b. If illegal or unauthorized activities occur, the forest owner or manager implements actions designed to curtail such activities and correct the situation to the extent possible for meeting all land management objectives with consideration of available resources.</p>	<p>C</p>	<p>The audit team observed that when illegal or unauthorized activities occur, MD DNR managers respond and correct the situation to the extent possible as confirmed through interviews and observations in the recent past at SRSF for example that was resolved by the installation of a gate to restrict access by Off Road Vehicles (ORVs) and at PGSF in the area between Maple Glade Road and Snaggy Mountain road where a program that combines user education by the Garrett Trail Committee and placement of large logs across illegal bike trails to discourage unauthorized trail use.</p> <p>Each State Forest works closely with Natural Resource Police officers as confirmed through interviews. The Natural Resource Police routinely monitors the forest for illegal ORV use and other illegal activities. ORV trails have been closed state-wide in response to a 2011 CAR. For example, SRSF closed one ORV trail for environmental reasons and is working with MD DNR's ORV stakeholder group to examine alternative locations for ORV trails.</p> <p>Signage including for example signage observed at various locations within GRSF, SRSF, PSF and CSF, interviews with Natural Resource Police who enforce MD DNR regulations, public information on the agency website and other locations and permanent trail closures are being used effectively to curtail unauthorized ORV activity and associated resource damage.</p>
<p>P2 Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.</p>		
<p>C2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.</p> <p><i>Applicability Note: For the planning and management of publicly owned forests, the local community is defined as all residents and property owners of the relevant jurisdiction.</i></p>	<p>C</p>	
<p>2.2.a. The forest owner or manager</p>	<p>C</p>	<p>This FME provides a range of compatible customary recreational uses as</p>

allows the exercise of tenure and use rights allowable by law or regulation.		confirmed by observations and interviews during this audit program including for example the use of trails, hunting, fishing, camping and collection including for example wild leek (<i>Allium tricoccum</i>).
2.2.b. In FMUs where tenure or use rights held by others exist, the forest owner or manager consults with groups that hold such rights so that management activities do not significantly impact the uses or benefits of such rights.	C	This FME consults with a variety of local user groups and through the use of its Citizens Advisory Committee to ensure that customary uses are not impacted by management activities. As confirmed through the lack of negative public comment associated with management activity impacts to other use rights a relatively high level of satisfaction exists.
C2.3. Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.	C	
2.3.a. If disputes arise regarding tenure claims or use rights then the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If these good-faith efforts fail, then federal, state, and/or local laws are employed to resolve such disputes.	C	<p>MD DNR established a grievance policy and maintains open communication with users of state forests through the Citizens Advisory Committee, comments received that are related to management plans and annual work plans, correspondence and meetings that are held at a variety of state-wide locations. MD DNR attempts to resolve disputes through direct communication. For example the complaint log for SRSF includes email communications between staff and local stakeholders about access concerns. The audit team also observed a SRSF trail section that currently crosses private land and is being re-routed to resolve access issues.</p> <p>Comments were received from the public regarding a decision to move the CF/PSF Foster tract from lease hunting into public hunting and several other strategically selected tracts from public hunting to lease hunting. This issue was resolved through the project review process, which included stakeholder consultation. The website was updated to reflect these hunting changes and a listserv was created to more quickly communicate updated information directly to interested parties. The final resolution resulted in a net gain of land open for public hunting and an increase in the number of available lease hunting opportunities.</p> <p>More Significant disputes are resolved through the Office of the Attorney General. MD DNR requested \$10,000 in FY12 to conduct surveys to resolve the most difficult boundary line cases. Contractual staff reclaim unmarked boundaries.</p>
2.3.b. The forest owner or manager documents any significant disputes over tenure and use rights.	C	Significant disputes related to tenure and use rights have not occurred. Disputes are documented and resolved by the Office of the Attorney General.
P3 The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.		
C3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.	C	
3.2.a. During management planning, the forest owner or manager consults with American Indian groups that have legal rights or other binding agreements to the FMU to avoid harming their	C	<p>Forest managers established dialogue with tribal leaders and the Maryland Commission on Indian Affairs. An invitation has been extended to Tribal Members to serve on local Citizens Advisory Committees and some representatives accepted the invitation.</p> <p>Eastern Forests: Chief Winterhawk, Nassue-Waiwash Tribe & Chief Rudy Hall, Accohannock Indian Tribe, Inc. serve on the Citizens Advisory Committee</p>

resources or rights.		(CAC); each member reviews & comments on Annual Work Plans. Mike Schofield, Forest Manager maintains CAC files/minutes & correspondents in the CF/Pocomoke State Forest Office. Western Forests: Managers met with Maryland Commission on Indian Affairs during 2011 and received input from the Maryland Commission on Indian Affairs. Chief Neal of the Shawnee Band is a member of the Advisory Committee and has met with SRSF staff.
3.2.b. Demonstrable actions are taken so that forest management does not adversely affect tribal resources. When applicable, evidence of, and measures for, protecting tribal resources are incorporated in the management plan.	C	MD DNR sales are reviewed by the Maryland Historical Trust for archeological sites. Tribal representatives are provided with the Annual Work Plan that details proposed harvest areas including the opportunity to comment.
C3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.	C	
3.3.a. The forest owner or manager invites consultation with tribal representatives in identifying sites of current or traditional cultural, archeological, ecological, economic or religious significance.	C	As confirmed through interviews with Jack Perdue, MD DNR has repeatedly invited consultation from tribal representatives. Forest managers established dialogue with tribal leaders and the Maryland Commission on Indian Affairs. An invitation has been extended to Tribal Members to serve on local Citizens Advisory Committees and some representatives accepted the invitation as described in C3.2.a
3.3.b. In consultation with tribal representatives, the forest owner or manager develops measures to protect or enhance areas of special significance (see also Criterion 9.1).	C	Tribal representatives serve on the Citizens Advisory Committees and work with the MD DNR to protect or enhance sites of special significance if documented on MD DNR lands.
C3.4. Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.	NA	
3.4.a. The forest owner or manager identifies whether <i>traditional knowledge</i> in forest management is being used.	NA	Traditional knowledge has not been used; confirmed through interviews.
3.4.b. When traditional knowledge is used, written protocols are jointly developed prior to such use and signed by local tribes or tribal members to protect and fairly compensate them for such use.	NA	Traditional knowledge has not been used; confirmed through interviews.
3.4.c. The forest owner or manager respects the confidentiality of tribal traditional knowledge and assists in the protection of such knowledge.	NA	Traditional knowledge has not been used; confirmed through interviews.
P4 Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers		

and local communities.		
C4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.	C	
4.1.a. Employee compensation and hiring practices meet or exceed the prevailing <i>local</i> norms within the forestry industry.	C	State employees and forestry contractors were interviewed. Full time employee compensation packages include competitive wages, benefits, training and decision-making opportunities and compensation meets the local norm in this region's industry based on these comments.
4.1.b. Forest work is offered in ways that create high quality job opportunities for employees.	C	Relationships with timber harvest operators/contractors have been established as part of a long-term relationship. Timber harvest operators, state forestry staff and long-term contract employees were interviewed and express satisfaction with their working relationship with MD DNR. Short-term contracts are used to provide employment for laborers and technicians; these employees are not eligible for benefits. Long-term contracts are also used to hire some employees when the creation of a new permanent position is not possible; in these examples, employees receive comparable pay grades however they do not receive benefits (sick time and health insurance). In these cases, MD DNR ensures that these long-term contract employees work within the capacity that is intended for these positions (i.e., ensure full compliance with COMAR Title 13) and tries to convert these employees to full-time status when possible.
4.1.c. Forest workers are provided with fair wages.	C	State employees and forestry contractors were interviewed; compensation meets the local norm in this region's industry based on these comments. . Long-term contracts are sometimes used to hire employees when the creation of a new permanent position is not possible; in these examples, employees receive comparable pay grades (state employees) however they do not receive benefits (sick time and health insurance). In these cases, MD DNR ensures that these long-term contract employees work within the capacity that is intended for these positions (i.e., ensure full compliance with COMAR Title 13) and tries to convert these employees to full-time status when possible.
4.1.d. Hiring practices and conditions of employment are non-discriminatory and follow applicable federal, state and local regulations.	C	The agency's website for the MD DNR Office of Fair Practice http://www.dnr.state.md.us/ofp/ includes the following statement: "...It is the policy of the Department of Natural Resources to provide equal employment opportunity, equal services and access to all qualified persons without regard to age, ancestry, color, creed, marital status, mental or physical disability, national origin, religion, political belief or opinion, race, sex, sexual orientation, genetic distinction. The Department of Natural Resources prohibits any such discrimination or harassment..." As confirmed through a web-based search, interviews, observations and contract review, non-discriminatory practices have been implemented in conformance with federal, state and local regulations.
4.1.e. The forest owner or manager provides work opportunities to qualified local applicants and seeks opportunities for purchasing local goods and services of equal price and quality.	C	Timber harvest contracts are routinely awarded to local companies including both large and small local companies. For example, SR-02-12 was awarded as a smaller than usual acreage to enable a local Amish farmer to complete this contract. Forestry staff are local residents.
4.1.f. Commensurate with the size and scale of operation, the forest owner or manager provides and/or supports learning opportunities to improve public understanding of forests and forest management.	C	MD DNR makes excellent use of signs to enhance public awareness of forests and forest management including for example those near the 16-acre Norway spruce sanitation project. Management activities are also routinely scheduled at Demonstration areas including Kindness (a), Kindness (b) and W46.
4.1.g. The forest owner or manager	C	As confirmed through interviews and contract review, MD DNR provided work

participates in local economic development and/or civic activities, based on scale of operation and where such opportunities are available.		opportunities in the past for prison laborers and the handicapped (PG-02-12) and provided off-season employment for Maryland commercial fishermen.
C4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.	C	
4.2.a. The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).	C	MD DNR's Policy & Procedure Manual (P3) describes a commitment to comply with laws and regulations including OSHA requirements. The State of Maryland established laws and policies covering health and safety of employees. The Division of State Documents (http://www.dsd.state.md.us/) and The Code of Maryland Regulations or COMAR (http://www.dsd.state.md.us/comar/comar.aspx) provide on-line access to Maryland's laws, regulations and the Maryland Register. MD DNR provides safety training to employees as confirmed for example through SRSF training records that were presented and reviewed during this audit program. Supervisors provide safety training when each seasonal field crew begins and periodically throughout the season. Management staff provides safety briefings prior to field work that includes hazardous conditions that are known to exist.
4.2.b. The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts or other written agreements include safety requirements.	C	<p>Evidence of a safe work environment includes:</p> <ul style="list-style-type: none"> • Timber harvests are conducted by a licensed operator and Master Logger as confirmed state-wide through interviews and contract review; • Safe work practices were observed during the audit, including the use of PPE and precautions taken against ticks. • Several full-time state forest staff have completed a first aid course; The MD DNR implements a training program for its employees that includes safety training, observation of practices and equipment maintenance as confirmed for example through GRSF training records that were presented and reviewed during this audit cycle; • SRSF staff exceeds regulatory standards by providing safety training to all employees; • Logging contractors are required to have safety programs as part of the Master Logger requirements; • The MD DNR supports regional efforts to train timber harvest operators <p>Evidence of contracts and other written agreements that include safety requirements includes:</p> <ul style="list-style-type: none"> • "Section 15. Accident Prevention" is included in each timber sale contract; • Attachment D of timber sale contract stipulates that the operator must obtain Master Logger status; • Parker Forestry Management Contract includes safety requirements; • BMP Checklist includes safety requirements; • Policy & Procedural Manual includes safety requirements; • DNR-352D v2.1 is a standard part of timber sale contracts and requires a clean work site and the use of spill kits.
4.2.c. The forest owner or manager hires well-qualified service providers to safely implement the management plan.	C	Attachment D of each timber sale contract includes the requirement that each operator must maintain Master Logger status. Parker Forestry staff, consultants to MD DNR in the eastern region, are well-qualified and include licensed Maryland foresters and experienced industry professionals. Harvesting crews were interviewed in both the eastern and western regions and each crew included Maryland Master Loggers.
C4.3 The rights of workers to	C	

<p>organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labor Organization (ILO).</p>		
<p>4.3.a. Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.</p>	C	<p>Each workers’ rights to organize are understood as confirmed through interviews; posters that explain these rights are posted in a variety of workplace locations. The rights of employees working in Maryland are protected by federal, state and local laws. The National Labor Relations Act guarantees each employee the right to self-organization, to bargain collectively, to engage in activities for their mutual aid and protection, or to refrain from any of these activities. Most federal, state, and local statutes are enforced by specific agencies and in Maryland, the Office of the Statewide Equal Employment Opportunity’s stated mission includes ... “Administer and enforce State and federal equal employment opportunity laws and policies; promote a work environment free of any unlawful discrimination, harassment and retaliation; and assist in the building of a well-diversified workforce for Maryland State government employees and applicants...” http://dbm.maryland.gov/eec/Pages/EEOHome.aspx.</p>
<p>4.3.b. The forest owner or manager has effective and culturally sensitive mechanisms to resolve disputes between workers and management.</p>	C	<p>MD DNR maintains a close relationship with employees and contractors. Interviews confirm a satisfactory working relationship with no reports of insensitivity or unresolved disputes.</p>
<p>C4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.</p>	C	
<p>4.4.a. The forest owner or manager understands the likely social impacts of management activities, and incorporates this understanding into management planning and operations. Social impacts include effects on:</p> <ul style="list-style-type: none"> • Archeological sites and sites of cultural, historical and community significance (on and off the FMU); • Public resources, including air, water and food (hunting, fishing, collecting); • Aesthetics; • Community goals for forest and natural resource use and protection such as employment, subsistence, 	C	<p>The Annual Work Plan and ID Team processes are strong examples of planning efforts that allow for consideration of social impacts. Evidence of conformance includes:</p> <ul style="list-style-type: none"> • Forest Management Plans include descriptions of archeological sites and sites of cultural, historical and community significance. An effective meeting between MD DNR management, SRSF staff and a concerned stakeholder was observed during this 2013 audit program at SRSF in relation to a potential conflict between listed archeological sites and the location of new ORV trail. • Forest Management Plans include descriptions of public resources, including air, water and food (hunting, fishing and collecting); the potential social impacts of hunting fishing and collecting were specifically considered and described during interviews. A public informational meeting was held during this 2013 audit cycle at a local Civic Center after several articles appeared in the local paper regarding the proposed changes to the hunting program at CF/PSF and described above in C.2.3. • Forest Management Plans include a description of aesthetics. Planning for harvests includes consideration of aesthetics; field foresters are responsible and are supported by ID Teams. The use of the variable retention harvest prescription is one example of aesthetic considerations during the process of deciding on locations

<p>recreation and health;</p> <ul style="list-style-type: none"> • Community economic opportunities; • Other people who may be affected by management operations. <p>A summary is available to the CB.</p>		<p>of clumped retention. Aesthetic considerations were specifically considered, described and incorporated for example on PGSF (Cranesville Road, Compartment 39B) and on PSF (P06) and on GRSF (Francis O Zumbun Overlook, GR-05-12 & GR-06-12). Confirmed through document review that the Policy & Procedure Manual includes for example the following section on visual quality: “In laying out forest harvest and thinning operations, particular care will be given to the need for visual quality protection. This will include location and operations of landings, decks, roads, and other areas of concentrated activity. Visual buffers will be maintained along areas where required.” The field forester applies visual buffers as needed and the buffer is illustrated on the harvest plan maps. The <i>‘Forestry Aesthetics Guide: Image and Opportunity’</i> is the reference publication used by CSF & PSF staff.</p> <ul style="list-style-type: none"> • MD DNR’s PR Procedures MFS and CAC Purpose Statement include community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health. In addition, a 2009 multi-stakeholder partnership including MD DNR representatives, engaged the public through the use of 5 listening sessions located across the state and culminating with the Forestry Summit. Key issues, strategies and recommendations for addressing these issues were developed. A key issue (Maintaining Viable Forests and a Viable Forest Industry in Maryland) included a strategy to inventory and manage State-owned forests as sustainable working forests. http://www.dnr.state.md.us/forests/pdfs/sas/ForestrySummitReport.pdf • Community economic opportunities are addressed in a variety of ways including the use of timber harvest contracts that vary in size and scale including for example two small harvest opportunities that were successfully contracted to an Amish farmer (SR-02-12) and to a Community Action Program for handicapped workers (PG-02-12). The use of NTFP collection permits that are most often issued to local residents. • Others who may be affected by management are activities are incorporated into the process in the following ways: Maryland Historical Trust is a member of the Interdisciplinary Team that reviews each Annual Work Plan & project. Records of Annual Work Plan comments for each State Forest are solicited and considered. <p>The first draft of each management plan or Annual Work Plan is reviewed including field visits by DNR’s internal interdisciplinary team members and each revision is reviewed by the Citizens Advisory Committee. The revised plan is posted on the web for a 30-day review period and a public announcement is distributed to each major news outlet in the state, Patch.com and other relevant blog sites.</p> <p>Other proposed activities including for example ROW issues with neighboring landowners, ad hoc salvage harvests, road realignments, acid mine mitigation, easement requests, adventure sporting events, insect studies and building razing are submitted to MD DNR for review and approval by DNR staff and the Maryland Historical Trust (if the proposal includes historic or archaeological topics).</p> <p>A 2009 multi-stakeholder partnership including the MD DNR surveyed forestry leaders and other interested individuals and groups during 5 listening sessions state-wide and culminated with the Forestry Summit. Four key issues were identified. Strategies and recommendations for addressing these issues were developed.</p> <p>MD DNR’s protocol for monitoring and incorporating social impact</p>
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		assessment into management decisions is effective and is based on review by the ID Team and Forest Advisory Committee as confirmed through review of the 2012-13 SRSF complaint log resolution sections.
4.4.b. The forest owner or manager seeks and considers input in management planning from people who would likely be affected by management activities.	C	The MD DNR has implemented an effective multi-step approach for seeking and considering input. State Forest Management Plan (SFMP) and Annual Work Plans (AWP) are developed with input from DNR's internal interdisciplinary team. The plans are reviewed by a Citizens Advisory Committee (CAC) which represents a range of public interests. Changes are made in response to CAC comments and each plan is posted online for public comment during a 30-day review period. A public informational meeting was held recently at a local Civic Center after several articles appeared in the local paper regarding the proposed changes to the hunting program at CF/PSF and described above in C.2.3.
4.4.c. People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action so that they may express concern.	C	The MD DNR takes a proactive approach and for example notifies adjacent landowners of prescribed fire and chemical application activities. The public is notified and encouraged to comment on each management plan, annual work plan and proposed harvesting activities. Public consultation process for AWP is detailed at http://www.dnr.maryland.gov/forests/workplans/index.asp . A public informational meeting was held recently at a local Civic Center after several articles appeared in the local paper regarding the proposed changes to the hunting program at CF/PSF and described above in C.2.3.
4.4.d. For public forests , consultation shall include the following components: <ol style="list-style-type: none"> 1. Clearly defined and accessible methods for public participation are provided in both long and short-term planning processes, including harvest plans and operational plans; 2. Public notification is sufficient to allow interested stakeholders the chance to learn of upcoming opportunities for public review and/or comment on the proposed management; 3. An accessible and affordable appeals process to planning decisions is available. 4. Planning decisions incorporate the results of public consultation. All draft and final planning documents, and their supporting data, are made readily available to the public. 	C	Items 1-4 are covered through the Citizens Advisory Committee (CAC) and consultation processes of the SFMP and Annual Work Plans. <ol style="list-style-type: none"> 1. The CAC for each State Forest is given the opportunity to review each State Forest Annual Work Plans and Sustainable Forest Management Plan which serves as the first layer in MD DNR's public notification policy. Each management plan and Annual Work Plan is posted on the MD DNR website and along with an announced 30-day review and comment period through media outlets. 2. The State Forester maintains an open door policy and comments from the public review processes are considered for incorporation into each management plan and Annual Work Plan. 3. Each management plan and Annual Work Plan is posted on the MD DNR website along with an announced 30-day review and comment period through media outlets. During the recent 12-month audit cycle, these announcements were sent to major news outlets in Maryland including Patch.com and several blogs. Personal announcements were made directly to each CAC member by the Forest Manager in response to previous comments from stakeholders who expressed a desire to have more advanced notice for public input. 4. Comments from the public review processes are considered for incorporation into each management plan and Annual Work Plan. Each management plan and Annual Work Plan is posted on the MD DNR website along with an announced 30-day review and comment period through media outlets.
C4.5. Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property,	C	

<p>resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.</p>		
<p>4.5.a. The forest owner or manager does not engage in negligent activities that cause damage to other people.</p>	C	<p>A variety of interviews were conducted; neither management nor employees reported known instances of substantiated negligent activities.</p>
<p>4.5.b. The forest owner or manager provides a known and accessible means for interested stakeholders to voice grievances and have them resolved. If significant disputes arise related to resolving grievances and/or providing fair compensation, the forest owner or manager follows appropriate dispute resolution procedures. At a minimum, the forest owner or manager maintains open communications, responds to grievances in a timely manner, demonstrates ongoing good faith efforts to resolve the grievances, and maintains records of legal suites and claims.</p>	C	<p>Proactive measures of providing access to local stakeholders to voice grievances include the use of a Citizens Advisory Committee. Each forest manager maintains open lines of communication in an effort to resolve known grievances. Neither management nor employees cited known instances of a dispute. Complaint files were reviewed and for example several complaints were referred to the Citizens Advisory Committee for review.</p>
<p>4.5.c. Fair compensation or reasonable mitigation is provided to local people, communities or adjacent landowners for substantiated damage or loss of income caused by the landowner or manager.</p>	C	<p>A variety of interviews were conducted; neither management nor employees reported known instances of a dispute or damage or other losses caused by MD DNR.</p>
<p>P5 Forest management operations shall encourage the efficient use of the forest’s multiple products and services to ensure economic viability and a wide range of environmental and social benefits.</p>		
<p>C5.6. The rate of harvest of forest products shall not exceed levels which can be permanently sustained.</p>	C	
<p>5.6.a. In FMUs where products are being harvested, the landowner or manager calculates the sustained yield harvest level for each sustained yield planning unit, and provides clear rationale for determining the size and layout of the planning unit. The sustained yield harvest level calculation is documented in the Management Plan.</p> <p>The sustained yield harvest level calculation for each planning unit is based on:</p> <ul style="list-style-type: none"> • documented growth rates for particular sites, and/or acreage of forest types, age-classes and species distributions; • mortality and decay and 	C	<p>Sustained yield harvest levels are calculated for each State Forest. Long-term plans include growth levels that are based on FIA data and CFI plots.</p> <ul style="list-style-type: none"> • Sustained yield calculations for each State Forest are based on 2002 CFI data. MD DNR is currently updating inventory data to better document current site level conditions that affect net growth. • Mortality and decay and other factors are included in the current calculations that are based on 2002 CFI data. • Annual harvest levels are stated based on areas subject to harvest in the General Management Zone. • Annual harvest levels are based on silvicultural practices described in each management plan (Chapter 5). • Annual harvest levels accurately reflect the management objectives and desired future conditions as described by the specific management plan (Chapter 5). <p>Annual harvest levels are determined during annual project planning and lead to Annual Work Plans for each forest. These harvest levels are conservative, particularly in the MD DNR forests associated with the western region. The use of modeling software was reviewed and is confirmed to be in use for projecting growth beyond a single rotation and with multiple entries</p>

<p>other factors that affect net growth;</p> <ul style="list-style-type: none"> • areas reserved from harvest or subject to harvest restrictions to meet other management goals; • silvicultural practices that will be employed on the FMU; • management objectives and desired future conditions. <p>The calculation is made by considering the effects of repeated prescribed harvests on the product/species and its ecosystem, as well as planned management treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.</p>		<p>for each of the 5 State Forests. Each State Forest Management Plan (Chapter 5 and Appendix H) describes this process.</p> <p>Eastern region: Inventory data is supplemented by a post-harvest cruise. The combination of these techniques is used to update inventory and to calculate growth.</p> <p>Western region: Long-term CFI plots exist (10, 20 and 30 years ago). A current 5-year inventory effort is in progress to complete a stand-level inventory using SILVAH Oak; sample stands have been selected and a significant portion of the plots have been completed.</p>
<p>5.6.b. Average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level.</p>	<p>C</p>	<p>Harvest levels are conservative and represent a small portion of annual growth (1/8 of annual growth) for each of the MD DNR State Forests including for example the following harvest level for the PGSF. The General Management Zone annual growth is approximately 2.1 MMBF and the average annual harvest rate since 2000 is approximately 30 % of the volume growing in the General Management Zone including:</p> <p>2005 = 925,113 BF 2006 = 731,568 BF 2007 = 487,027 BF 2008 = 793,002 BF 2009 = 251,990 BF 2010 = 168,131 BF 2012 = 665,500 BF</p>
<p>5.6.c. Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across the FMU. Overstocked stands and stands that have been depleted or rendered to be below productive potential due to natural events, past management, or lack of management, are returned to desired stocking levels and composition at the earliest practicable time as justified in management objectives.</p>	<p>C</p>	<p>Rates and methods of harvest in the eastern region reflect an established history of achieving desired conditions and improving or maintaining the forest resource.</p> <p>Due to relatively low harvest rates, overstocked stands in the western region are most likely to occur in the relatively uncommon and previously planted mature pine and spruce stands. As confirmed through interviews with field foresters, observations of current harvests including for example a 16-acre harvest within a Norway spruce plantation and Annual Work Plans, the status of overstocked softwood plantations is being addressed and includes plans (Chapter 5 and Annual Work Plans) to intensively manage to maintain the health and vigor of this under-represented softwood habitat cover. The completion of an updated stand-level inventory that is in progress provides the information necessary to continue this effort.</p> <p>Gypsy moth mortality, hail and ice damage continue to effect hardwood stands in the western region; salvage operations continue to struggle to keep up with damage and subsequent mortality. Salvage sales focus on the removal of dead and dying trees as observed for example at GR-01-13; SR-02-12; SR-Norway spruce plantation and SR-01-11. GR-01-13 was implemented under an expedited review process but including required steps of review.</p> <p>Current salvage harvest projects including for example GR-01-13; SR-02-12 and SR-01-11. GR-01-13 do an excellent job of combining the prescription for the removal of dead and dying material with components more common to a regeneration harvest (removal of some of low quality live overstory red maple</p>

		and black gum for example) while considering and implementing MD DNR’s retention guidelines. These practices successfully quickly move the newly regenerated stands toward a more desirable species composition.
5.6.d. For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial operations or where traditional or customary use rights may be impacted by such harvests. In other situations, the forest owner or manager utilizes available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.	C	DNR completed research and utilized available information and new information to set harvesting levels for at least one NTFP that will not result in a depletion of its growing stocks or other adverse effects to the forest ecosystem. For example, MD DNR recently initiated a program to monitor American ginseng (<i>Panax quinquefolius</i>) harvest levels within the State Forests in the western region and the on-going 5-year inventory plots provide detailed information on the presence of American ginseng. Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits have been issued through the fall of 2012, MD DNR’s Secretary developed a policy (March 2013) to prohibit the harvest of American ginseng from State lands. The policy was effective immediately.
P6 Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.		
C 6.2. Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping, and collecting shall be controlled.	C	
6.2.a. If there is a likely presence of RTE species as identified in Indicator 6.1.a then either a field survey to verify the species' presence or absence is conducted prior to site-disturbing management activities, or management occurs with the assumption that potential RTE species are present. Surveys are conducted by biologists with the appropriate expertise in the species of interest and with appropriate qualifications to conduct the surveys. If a species is determined to be present, its location should be reported to the manager of the appropriate database.	C	When a site has a potential RTE species, timber operations do not occur until a field check has been performed by Natural Heritage ecologists. The Maryland Natural Heritage Program maintains a well-populated database of RT&E species. Field foresters and specialists review special sites and provide information to the Maryland Natural Heritage Program. Field foresters located in eastern Maryland use a specialized form to report observations of RT&E species to Maryland Heritage. Each prescription for each timber harvest is based on an ID process that includes a process for the MD Natural Heritage staff to comment and ensure RTE species are identified and protected.
6.2.b. When RTE species are present or assumed to be present, modifications in management are made in order to maintain, restore	C	RTE species are protected through a network of Ecologically Significant Areas (ESA’s) located within each of the State Forests. ESAs are described in Chapter 4.3 and Chapter 7.2.1 of each property’s management plan. For example the PGSF Sustainable Forest Management Plan names 33 sites and

<p>or enhance the extent, quality and viability of the species and their habitats. Conservation zones and/or protected areas are established for RTE species, including those S3 species that are considered rare, where they are necessary to maintain or improve the short and long-term viability of the species. Conservation measures are based on relevant science, guidelines and/or consultation with relevant, independent experts as necessary to achieve the conservation goal of the Indicator.</p>		<p>SR Sustainable Forest Management Plan describes 22 sites.</p> <p>Sites containing rare plant and or animal communities have been identified and are managed for their special qualities. The MD DNR Wildlife & Heritage Service is involved in assuring that special sites are inventoried, marked and managed including database maintenance for each site.</p> <p>The number and extent of ESA's is evidence of a well-established RTE protection program. For example, PGSF has designated 6,442 acres in 34 ESA's and about 37% of the forest area.</p> <p>During recent years, MD DNR also completed actions to protect RTE species from ORV impacts, collectors and other activities. The following conservation measure on MD DNR land are based on relevant science, guidelines and consultation with relevant, independent experts:</p> <ul style="list-style-type: none"> - Damage to rare sand dune community resulted in the closure of the Chandler Tract ORV Trail - Damage to native brook trout in Poplar Lick Stream led to closure of the Poplar Lick trail. - On GRSF, Heritage is conducting a Kates Mountain Clover Study (<i>Trifolium virginicum</i>). New conservation zones have not yet been established. - American ginseng (<i>Panax quinquefolius</i>), an S2S3 and CITES listed species is now prohibited (by MD DNR policy) from collection on State Lands. MD DNR completed research and utilized available information and new information to protect this NTFP from depletion and more recently MD DNR initiated a program to monitor American ginseng harvest levels within the State Forests in the western region and the on-going 5-year inventory plots provide detailed information on the presence of American ginseng. Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits had been issued through the fall of 2012, MD DNR's Secretary developed a policy (Ginseng Harvest Prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands. The policy was effective immediately.
<p>6.2.c. For medium and large public forests (e.g. state forests), forest management plans and operations are designed to meet species' recovery goals, as well as landscape level biodiversity conservation goals.</p>	<p>C</p>	<p>See also findings for 6.2.b.</p> <p>The requirements of this section of the standard are primarily accomplished through the ID team process described in detail elsewhere in this report. Harvest operations and restoration projects are reviewed by Heritage members of the ID team. Restoration projects for specific sites are listed within each Annual Work Plan.</p> <p>Evidence of conformance: For example the Delmarva Fox Squirrel (DFS) habitat protection and enhancement on the CSF and PSF; on PGSF, previously permitted collection of ginseng is now prohibited as of 4/2013; on PGSF, illegal collection/hunting of rattlesnakes has occurred in the past and the MD DNR ID team proposed a seasonal road closure. A gate has been installed.</p>
<p>6.2.d. Within the capacity of the forest owner or manager, hunting, fishing, trapping, collecting and other activities are controlled to avoid the risk of impacts to vulnerable species and communities (See Criterion 1.5).</p>	<p>C</p>	<p>The MD DNR relies primarily on the Natural Resource Police for control of hunting, fishing, trapping, collecting and other impacts to RT&E species. Interviews with MD DNR staff and several Natural Resource Police confirm a high level of cooperation between these state agencies.</p> <p>In Western Maryland where permits for the harvest of American ginseng (<i>Panax quinquefolius</i>) had been issued through the fall of 2012, MD DNR's Secretary developed a policy (Ginseng harvest prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands. The policy was effective immediately. It is clear that from interviews with MD DNR management and staff and several Natural Resource Police that these 2 agencies can provide reasonable control over the recently prohibited collection of American ginseng a vulnerable S2S3 and CITES specie as described previously in section 6.2.b. The current plan for control will begin with a proactive step including the mailing of letters to known collectors in</p>

		<p>advance of the harvest/collection season.</p> <p>On PGSF, illegal collection/hunting of rattlesnakes has occurred in the past and the MD DNR ID team proposed a seasonal road closure. A gate has been installed.</p>
<p>C6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.</p>	C	
<p>6.3.a.1. The forest owner or manager maintains, enhances, and/or restores under-represented successional stages in the FMU that would naturally occur on the types of sites found on the FMU. Where old growth of different community types that would naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance and/or restore old growth characteristics.</p>	C	<p>As confirmed through interviews with field foresters and other staff and review of a variety of current management plans, MD DNR is aware of the under-represented landscape level successional stages (early and late-seral) and have demonstrated substantial efforts to maintain, enhance and/or restore these communities. Evidence includes:</p> <p><u>Eastern Forests</u></p> <ul style="list-style-type: none"> • Old Growth Ecosystem Management Areas (OGEMA) & RSAs established (Alex Clark, GIS) • SFMP 3.2, page 39, Appendix J, Chapter 5 • 2008 Old Growth Policy • On CF/PSF the staff has set aside multiple stands (at various successional stages) in Old Growth Management Areas (OGEMA) allowing conservation and improvement of those stands. • Mixed pine stands on the PSF have been prescribe burned then harvested using seed tree and shelterwood methods, retaining pond pine, short leaf and/or pitch pine instead of loblolly pine. <p><u>Western Forests</u></p> <ul style="list-style-type: none"> • Old Growth and Old Growth Ecosystem Management Areas- Chapter 3.2 (P38) PGSF Management Plan. • Kirk Orchard- Early succession wildlife habitat focus areas and 1 of 3 special habitat areas. Treatments observed during a previous audit program on Green Ridge State Forest. • Anthony's Ridge Special Wildlife Management Area (~900 acres) and 1 of 3 special habitat areas. Currently a 100-year old matrix. Treatments for special species designed to maximize habitat (e.g. Golden Winged Warbler) based on BMPs for these species and including for example 10-acre regeneration harvests with residual stems. This is a focal area for GWW in MD. Plan completed February 2013 with cooperation from multiple partners. Practices implemented and on schedule. • Approximate 50% of these western State Forests are not zoned for active management and are therefore developing old forest characteristics over time. • A variety of recent overstory removals and variable retention harvests resulted in the creation of under-represented early successional communities including for example PGSF Cranesville Road-Compartment 39B; PGSF Swallow Falls Road-Compartment 39A; P06; GR-06-12; GR-01-13; GR-05-12; SR-02-12 and SR-01-11. • On PGSF the staff is maintaining 4 acres of Red Spruce plantations, and is managing and monitoring crop tree release work in 4 acres of native Red Spruce in effort to facilitate natural regeneration and spread of the native stand.
<p>6.3.a.2. When a rare ecological community is present, modifications are made in both the management plan and its implementation in order to maintain, restore or enhance the</p>	C	<p>MD DNR demonstrates exceptional efforts to identify rare ecological communities for protection, management and/or restoration.</p> <p>For example, the Wango Pines Restoration project on the Chesapeake State Forest includes a 134-acre restoration project including the use of prescribed fire to simulate a crown fire in this area that has a 4-8 year fire regime.</p>

<p>viability of the community. Based on the vulnerability of the existing community, conservation zones and/or protected areas are established where warranted.</p>		<p>Within the GRSF management plan, critical habitats have been mapped for state listed or uncommon species, shale barrens communities, old growth and potential old growth, vernal pools and unique open habitats. Similarly, the Potomac Garrett State Forest management plan describes 33 ecologically significant areas as well as other state protected lands.</p> <p>SRSF's Russell Road Sale/SR-01-11 (in progress), includes a 160-acre salvage operation resulting from a 2006-2007 Gypsy moth defoliation that was followed by ice damage. This salvage operation will create under-represented early successional habitat and the harvest operation will be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration. In an exceptional example of coordinated management, the prescribed fire will begin upslope of the salvage area in the nearly adjacent sand meadows/barren (RSA) and travel through most of this salvage area to a skid road/fire break lower on the slope and stopping before an old growth stand (HCVF). Prescribed fire minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community. This is an excellent example of research and cooperation with Heritage, TNC and others for assistance with a prescribed fire prescription of this size.</p>
<p>6.3.a.3. When they are present, management maintains the area, structure, composition, and processes of all Type 1 and Type 2 old growth. Type 1 and 2 old growth are also protected and buffered as necessary with conservation zones, unless an alternative plan is developed that provides greater overall protection of old growth values.</p> <p>Type 1 Old Growth is protected from harvesting and road construction. Type 1 old growth is also protected from other timber management activities, except as needed to maintain the ecological values associated with the stand, including old growth attributes (e.g., remove exotic species, conduct controlled burning, and thinning from below in dry forest types when and where restoration is appropriate).</p> <p>Type 2 Old Growth is protected from harvesting to the extent necessary to maintain the area, structures, and functions of the stand. Timber harvest in Type 2 old growth must maintain old growth structures, functions, and components including individual trees that function as refugia (see Indicator 6.3.g).</p> <p>On public lands, old growth is protected from harvesting, as well as from other timber management activities, except if needed to</p>	<p>C</p>	<p>Type 1 and Type 2 old growth forests have been identified and protected as described and mapped in the State Forest management plans for each of the five state forests. Confirmed that old growth layers appear in the GIS layer for GRSF and PGSF and SRSF. Audit team verified staff familiarity with the Policy and Procedures Handbook, Appendix F <i>Management Guidelines for the Conservation and Protection of Old Growth Forests</i> and details contained in each State Forest management plan (Chapter 3).</p>

<p>maintain the values associated with the stand (e.g., remove exotic species, conduct controlled burning, and thinning from below in forest types when and where restoration is appropriate).</p> <p>On American Indian lands, timber harvest may be permitted in Type 1 and Type 2 old growth in recognition of their sovereignty and unique ownership. Timber harvest is permitted in situations where:</p> <ol style="list-style-type: none"> 1. Old growth forests comprise a significant portion of the tribal ownership. 2. A history of forest stewardship by the tribe exists. 3. High Conservation Value Forest attributes are maintained. 4. Old-growth structures are maintained. 5. Conservation zones representative of old growth stands are established. 6. Landscape level considerations are addressed. 7. Rare species are protected. 		
<p>6.3.b. To the extent feasible within the size of the ownership, particularly on larger ownerships (generally tens of thousands or more acres), management maintains, enhances, or restores habitat conditions suitable for well-distributed populations of animal species that are characteristic of forest ecosystems within the landscape.</p>	<p>C</p>	<p>MD DNR accomplishes this required section of the standard through a network of special management areas including:</p> <ul style="list-style-type: none"> - Ecologically Significant Areas - Special Wildlife Habitat Areas (e.g., GRSF’s Kirk Orchard and Anthony’s Ridge Special Wildlife Management Areas) - Old Growth and Old Growth Ecological Management Areas - Wildlife Habitat Areas - Forest Interior Dwelling Bird habitat (FIDS) - Delmarva Fox Squirrel (DFS) habitat <p>Evidence: A variety of State Forest management plans, GIS maps, field stops described elsewhere in this report. See section 2.1 (field tour).</p>
<p>6.3.c. Management maintains, enhances and/or restores the plant and wildlife habitat of Riparian Management Zones (RMZs) to provide:</p> <ol style="list-style-type: none"> a) habitat for aquatic species that breed in surrounding uplands; b) habitat for predominantly terrestrial species that breed in adjacent aquatic 	<p>C</p>	<p>Rivers, streams, lakes and other water bodies as specified in best management practices are mapped and marked in the field (using paint or flagging) prior to conducting harvesting or other management practices as confirmed during the current field audit of sites described elsewhere in this report.</p> <ol style="list-style-type: none"> a. For example, habitat for aquatic species that breed in surrounding uplands was specifically observed by the use of significant uncut island RMZs at GR-06-12, GR-01-13, SR-02-12 and GR-01-10. b. For example, habitat for terrestrial species that breed in adjacent aquatic habitats was specifically observed by the use of significant uncut island RMZs at SR-01-11, GR-06-12, GR-01-13, SR-02-12 and GR-01-10.

<p>habitats;</p> <p>c) habitat for species that use riparian areas for feeding, cover, and travel;</p> <p>d) habitat for plant species associated with riparian areas; and,</p> <p>e) stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem.</p>		<p>c. For example, habitat for species that use riparian areas for feeding cover and travel was specifically observed by the use of significant uncut island RMZs at GR-06-12, GR-01-13, SR-02-12 and GR-01-10.</p> <p>d. For example, habitat for plant species associated with riparian areas was specifically observed by the use of significant uncut island RMZs at GR-06-12, GR-01-13, SR-02-12 and GR-01-10.</p> <p>e. For example, stream shading including the provision for input of wood and litter was specifically observed by the use of significant uncut island RMZs at GR-06-12, GR-01-13 and GR-01-10 which provide woody debris inputs and other litter to the aquatic system.</p>
<p>Stand-scale Indicators</p> <p>6.3.d Management practices maintain or enhance plant species composition, distribution and frequency of occurrence similar to those that would naturally occur on the site.</p>	<p>C</p>	<p>Within the eastern region, an abundance of loblolly pine exists and management practices (e.g., retain, release oaks) are designed to decrease the relative abundance of loblolly over time and increase the presence of other native species.</p> <p>Within the western region, the audit team observed instances of promoting early successional habitat at Kirk Orchard and Anthony’s Ridge Special Wildlife Habitat Areas to benefit populations of species that are in decline and dependent on this habitat type. The use of SILVAH OAK within the western region’s forests will also help to ensure maintenance/enhancement of forest composition that is native to these sites. The audit team confirmed that MD DNR field foresters have an exceptional understanding of SILVAH OAK.</p> <p>The successful retention of oak regeneration within some of the State Forests in the western region, where moderate deer populations and preferential browsing by deer may contribute to regeneration delays is a concern for MD DNR. Temporary deer fencing has been installed in pilot projects on the PGSF (Swallow Falls Road, Compartment 39A) with preliminary observations showing positive results.</p>
<p>6.3.e. When planting is required, a local source of known provenance is used when available and when the local source is equivalent in terms of quality, price and productivity. The use of non-local sources shall be justified, such as in situations where other management objectives (e.g. disease resistance or adapting to climate change) are best served by non-local sources. Native species suited to the site are normally selected for regeneration.</p>	<p>C</p>	<p>Planting is rarely implemented statewide. Within the western region natural regeneration prescriptions are used however 600 oak seedlings were planted to supplement natural regeneration within a pilot project area that included deer fencing; seedlings were from MD seed sources. A recent restoration site on Pocomoke Forest and the Foster tract in the eastern region included some planting of native Shortleaf Pine and the seed originated from a site on PSF. A 2013 sanitation harvest in a Norway spruce plantation, under-planting of native white pine has been discussed.</p>
<p>6.3.f. Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include:</p> <p>a) large live trees, live trees with decay or declining health, snags, and well-distributed coarse down and dead woody material. Legacy trees where present are not harvested; and</p> <p>b) vertical and horizontal complexity.</p> <p>Trees selected for retention are</p>	<p>C</p>	<p>MD DNR recently designed and implemented a new policy: <i>Forest Stand Retention For Forest Operations on Maryland State Forests</i>. Conformance to this policy is monitored by DNR during the DNR’s Internal Silvicultural Audits (ISA). These audits are completed by the ID Team during each annual work plan review. The ISA team routinely includes the Regional Forester, Forest Manager & staff, Forest Resource Planning Program Manager and contractors.</p> <p>Each of the current harvests observed and described in detail elsewhere in this report contained adequate trees for retention that are representative of the dominant species. The audit team observed consistent implementation of Md DNR’s retention policy including:</p> <p>a) GR-06-12, GR-01-13, SR-02-12 and P06 for example include large live trees, live trees with decay or declining health, snags and well-distributed woody material. Legacy trees where present are not harvested; and</p> <p>b) GR-06-12, GR-01-13, SR-02-12 and GR-01-10 for example include both vertical and horizontal complexity.</p>

<p>generally representative of the dominant species found on the site.</p>		<p>See section 2.1 (field tour).</p>
<p>6.3.g.1 In the Southeast, Appalachia, Ozark-Ouachita, Mississippi Alluvial Valley, and Pacific Coast Regions, when even-aged systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit as described in Appendix C for the applicable region.</p> <p>In the Lake States Northeast, Rocky Mountain and Southwest Regions, when even-aged silvicultural systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime unless retention at a lower level is necessary for the purposes of restoration or rehabilitation. See Appendix C for additional regional requirements and guidance.</p>	<p>C</p>	<p><i>Forest Stand Retention For Forest Operations on Maryland State Forests</i>, a retention policy has been recently designed and implemented as confirmed by on- site observations of completed even-aged regeneration treatments and including ample and varied green and dead trees being retained in both islands and dispersed retention.</p> <p>Within the western forest region (Appalachia Region) observations include variable retention harvests and salvage operations on Potomac-Garrett State Forest, Savage River State Forest and Green Ridge State Forest. In each case, harvest openings > 10-acres include substantial amounts of retention.</p> <p>Within the eastern forest region (Southeast Region) even-aged silviculture including overstory removals are restricted to previously established pine plantations that are being managed as natural stands and that are less than 40 acres in size (except in the case of a restoration plan developed by WHS and which is based on best available science). For example the P06 harvest site includes 11 acres of retention established as both islands and dispersed retention.</p> <p>See section 2.1 (field tour).</p>
<p>6.3.g.2 Under very limited situations, the landowner or manager has the option to develop a qualified plan to allow minor departure from the opening size limits described in Indicator 6.3.g.1. A qualified plan:</p> <ol style="list-style-type: none"> 1. Is developed by qualified experts in ecological and/or related fields (wildlife biology, hydrology, landscape ecology, forestry/silviculture). 2. Is based on the totality of the best available information including peer-reviewed science regarding natural disturbance regimes for the FMU. 3. Is spatially and temporally explicit and includes maps of proposed openings or areas. 4. Demonstrates that the variations will result in equal or greater benefit to wildlife, water 	<p>C</p>	<p>The completed Wango Pines Restoration Project that involved a 158-acre final harvest is 1 example of a qualified plan that included minor departures from the opening size limits. This restoration project includes a qualified plan as described in items 1-5 of 6.3.g.2.</p>

<p>quality, and other values compared to the normal opening size limits, including for sensitive and rare species.</p> <p>5. Is reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings.</p>		
<p>6.3.h. The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control <i>invasive species</i>, including:</p> <ol style="list-style-type: none"> 1. a method to determine the extent of invasive species and the degree of threat to native species and ecosystems; 2. implementation of management practices that minimize the risk of invasive establishment, growth, and spread; 3. eradication or control of established invasive populations when feasible: and, 4. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species. 	<p>C</p>	<ol style="list-style-type: none"> 1. MD DNR recently implemented a state-wide Early Detection & Rapid Response Plan which includes the following excerpt: “This plan is designed to provide timely identification and effective treatment of small (<1/4 Acre) outbreaks of invasive species on State Lands. The intent is to take a proactive approach for the protection of native community types in the forest”. MD DNR is in the middle of its 5-year forest inventory project and the presence of invasive plants is one of the features included in the forest inventory (SILVAH Oak); invasive plants are also noted and monitored during routine project planning and timber sale inspection reports. In addition special invasive treatment projects are documented in Annual Work Plans. In addition, the 2011 MD legislature authorized the establishment of an Invasive Plant Advisory committee that develops and ranks invasive plants. Finally, MD DNR developed two research projects in cooperation with the MD Wildlife and Heritage Service. The first project included GRSF and determined how often common invasive species occurred, describes regional patterns and concluded that levels of invasion are not as severe as documented levels in other parts of the state. The second project focuses on the presence of invasive plants in ESAs and has selected a section of CSF as a study site. 2. MD DNR is working with their Natural Heritage Program to develop exotic/invasive plant species Best Management Practices guidelines. In addition, research discussions with harvest operators regarding the effective and efficient use of power washing equipment before harvest machinery enters a State Forest harvest area has been initiated and has not met with resistance. The details of this practice are still being developed. MD DNR is reviewing 2 management practice programs that were developed elsewhere (NY TNC & WI) with consideration of adapting the practices to the MD DNR system. 3. For example, a recent April 2011 treatment and October 2012 follow-up of Garlic Mustard (<i>Alliaria petiolata</i>) Control Project - Wallman/Laurel Run and the Japanese Knotweed (<i>Polygonum cuspidatum</i>) Control project - Compartment 5 Backbone Mountain (both at Potomac Garrett State Forest) include ground spraying in designated areas, follow-up monitoring and re-treatment as necessary. In the example of the Wallman Invasive Species Control Project, Compartments 21-26, this is the 3rd year of a 5-7 multi-year backpack application of Glyphosate to control Garlic Mustard with specific focus on roadsides and drainage areas with some work on slopes. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary. One ID team member describes this need to “pick your battles” and this is a battle worth fighting due to the nearby weed-free ESA and HCVF communities. In another 2012 example on the SRSF, MD DNR staff demonstrated its ability to implement an early detection and rapid response in an impressive efforts to treat and prevent the spread of the newly discovered yellow

		<p>archangel (<i>Lamiastrum galeobdolon</i>). This example confirms a high level of coordination among field ID teams, a proactive approach to invasive plant species control and an exceptional ability to quickly treat the area.</p> <p>4. The MD DNR Natural Heritage Program is responsible for most of the monitoring of control measures and the State Forests represent the major locations for their suppression projects. MD DNR is currently reviewing a management practice program that was developed by NY TNC and is considering adapting the practice to the MD DNR system. In addition, MD DNR is in the middle of its 5-year forest inventory project and the presence of invasive plants is 1 of the features included in the forest inventory (SILVAH Oak); invasive plants are also noted and monitored during routine project planning and timber sale inspection reports. As one example of the many control projects reviewed during the 2013 audit, this is the 3rd year of a 5-7 multi-year backpack application of Glyphosate within the Garlic Mustard Control Project - Wallman/Laurel Run, Potomac Garrett State Forest. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary and has been implemented.</p>
<p>6.3.i. In applicable situations, the forest owner or manager identifies and applies site-specific fuels management practices, based on: (1) natural fire regimes, (2) risk of wildfire, (3) potential economic losses, (4) public safety, and (5) applicable laws and regulations.</p>	<p>C</p>	<p>Management in the form of fuel reduction occurs only in conjunction with other objectives.</p> <p>In the recent past, the Wango Pines Restoration project on the Chesapeake State Forest included a 134-acre restoration project including the use of prescribed fire to simulate a crown fire in this area that has a 4-8 year fire regime.</p> <p>In a more recent example, site preparation and ecological restoration projects like the SRSF's Russell Road Sale/SR-01-11 (in progress) that includes a 160-acre salvage prescription is the result of a 2006-2007 Gypsy moth defoliation that was followed by ice damage. This salvage operation will be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration.</p> <p>1) In an exceptional example of coordinated management, the prescribed fire will begin upslope of the salvage area in the nearly adjacent fire-adapted sand meadows/barren (RSA) and travel through most of this salvage area to a skid road/fire break lower on the slope and stopping before an old growth stand (HCVF). In this situation, the use of prescribed fire within this salvage operation minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhance the nearly adjacent rare sand meadows/barren community. This is an excellent example of research and cooperation with Heritage, TNC and others for assistance with the planning and implementation of a prescribed fire of this size. MD Heritage staff specialists monitor sites that have a high potential for rare species for presence of target species following burn treatments.</p> <p>2) In this situation, the use of prescribed fire within this salvage operation minimizes risk of wild fire in this stand that includes nearly 100% mortality, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community that is located upslope of the salvage area.</p> <p>3) This 160-acre salvage prescription is the result of a 2006-2007 Gypsy moth defoliation that was followed by ice damage and yielded nearly 100% mortality of this stand including most of the regeneration. This prescription that includes the use of prescribed fire may improve the regeneration success of oak on this site and thus provide a future economic gain.</p> <p>4) Procedures for establishing each prescription include evaluating each site for potential hazards (e.g. smoke, location of fire breaks) as described in the SRSF Management Plan (Chapter 10 p 117). This is an excellent example of research and cooperation with Heritage, TNC and others for assistance with the implementation of a prescribed fire of this size and in</p>

		<p>consideration of public safety.</p> <p>5) This is an excellent example of research and cooperation with Heritage, TNC and others for assistance with the implementation of a prescribed fire of this size and for coordination of the development of a prescribed burn plan prepared by MD DNR fire staff based on <i>A Guide to Prescribed Fire in Southern Forests</i> (USDA 1989) and appropriate permits.</p>
C6.5. Written guidelines shall be prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.	C	
6.5.a. The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.	C	MD DNR completes a BMP checklist for each harvest activity and recently completed the preparation, implementation and 2013 revision of <i>Rutting Guidelines For Forest Operations on Maryland State Forests</i> .
6.5.b. Forest operations meet or exceed Best Management Practices (BMPs) that address components of the Criterion where the operation takes place.	C	Best Management Checklists are used in association with Timber Sale Inspection reports. Each of the management activities implemented during this past year and observed during the 2013 audit meet BMP standards.
6.5.c. Management activities including site preparation, harvest prescriptions, techniques, timing, and equipment are selected and used to protect soil and water resources and to avoid erosion, landslides, and significant soil disturbance. Logging and other activities that significantly increase the risk of landslides are excluded in areas where risk of landslides is high. The following actions are addressed: <ul style="list-style-type: none"> • Slash is concentrated only as much as necessary to achieve the goals of site preparation and the reduction of fuels to moderate or low levels of fire hazard. • Disturbance of topsoil is limited to the minimum necessary to achieve successful regeneration of species native to the site. • Rutting and compaction is minimized. • Soil erosion is not accelerated. • Burning is only done when consistent with natural disturbance regimes. • Natural ground cover disturbance is minimized to the extent necessary to 	C	<p>Each of the management activities implemented during this past year and observed during the 2013 audit protect soil and water resources and were planned to avoid erosion and significant soil disturbance.</p> <ul style="list-style-type: none"> • The practice of slash concentration was not observed in the western or eastern region harvests. • The disturbance of the topsoil was minimal as observed on each of the timber harvest sites visited during the 2013 audit. • Rutting was not observed and compaction was minimal as observed on each of the timber harvest sites visited during the 2013 audit. • Soil erosion was not observed on each of the timber harvest sites visited during the 2013 audit. • The use of burning was not observed. • Natural ground cover disturbance was minimized as observed on observed on each of the timber harvest sites visited during the 2013 audit. • Whole tree harvesting was not observed. • Low impact equipment is not commonly available in these regions as confirmed through interviews with field foresters.

<p>achieve regeneration objectives.</p> <ul style="list-style-type: none"> • Whole tree harvesting on any site over multiple rotations is only done when research indicates soil productivity will not be harmed. • Low impact equipment and technologies is used where appropriate. 		
<p>6.5.d. The transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, maintained, and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects, while allowing for customary uses and use rights. This includes:</p> <ul style="list-style-type: none"> • access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts; • road density is minimized; • erosion is minimized; • sediment discharge to streams is minimized; • there is free upstream and downstream passage for aquatic organisms; • impacts of transportation systems on wildlife habitat and migration corridors are minimized; • area converted to roads, landings and skid trails is minimized; • habitat fragmentation is minimized; • unneeded roads are closed and rehabilitated. 	<p>C</p>	<p>MD DNR recently developed and has begun the implementation of A Road Maintenance Policy. The legislature has approved funding for the initial stage of this project. Design and re-design steps are in progress. Inventory is in progress. Most of the construction will depend upon future funds and will be completed in future years.</p> <ul style="list-style-type: none"> • Gates are used to close off access as needed. ORV trails were closed during the past year in response to a 2011 CAR. • Road density is minimal as confirmed through on-site observations and map review. • Erosion was not observed in relation to current harvest operations. • Sediment was not observed being discharged into any stream in association with harvest operations. On the Lostland Run Road Rehabilitation Project, a portion of the road maintenance project funded through a National Recreation Trail Grant (\$30,000 projects with 1-2 grants/year) was used to replaced 26 cross-drain culverts; the audit team observed ~ 10 of these replacements as well as associated grading and resurfacing on 2,000 lineal feet of a 3.5-mile section of road including the design and installation of stone headwalls and tail walls. However, additional work to replace culverts in active streams has not yet been completed and sediment discharge into streams is not minimized. In another example on East Valley Road/GR-07-10, access to the area has been appropriately closed and the recent timber harvest operator improved access to landing (only). However, the road beyond this harvest operation includes exposed bedrock, water routinely carried in road bed, eroded tracks and non-functional plugged culverts. Sediment from the road is discharging directly into a stream. This work requires detailed permit applications including a 3-6 month permit approval process through Maryland Department of the Environment; permit application and review is causing maintenance delays (that are beyond the control of MD DNR) even though funding is in place to pay for repair work. In some cases other maintenance repairs that do not require permitting on nearby section of some of these roads have been completed. See OBS 2013.1 • Stream passage was routinely observed to be adequate for aquatic organisms. However on Lostland Run Road Rehabilitation Project and East Valley Road/GR-07-10 stream passage was observed to be inadequate for aquatic organisms. This work requires detailed permit applications including a 3-6 month permit approval process through Maryland Department of the Environment; permit application and review is causing maintenance delays (that are beyond the control of MD DNR) even though funding is in place to pay for repair work. See OBS 2013.1 • Transportation systems allowed minimized impacts on wildlife habitat including for example adequate filter strips on stream and correctly installed temporary stream crossings. • The amount of area converted to roads, landings and skid trails is minimal as confirmed through observations and map review.

		<ul style="list-style-type: none"> • Habitat fragmentation is low in MD DNR forests • Gates are used to close off access when roads not needed which allows roads to green up and minimizes illegal ORV use of forest roads. However, unneeded/closed off sections of roads have not yet been rehabilitated as described in the road maintenance plan; for example on East Valley Road/GR-07-10, access to the area has been appropriately closed and the recent timber harvest operator improved access to landing (only). However, the road beyond this harvest operation includes exposed bedrock, water routinely carried in road bed, eroded tracks and non-functional plugged culverts. Sediment from the road is discharging directly into a stream. This work requires detailed permit applications including a 3-6 month permit approval process through Maryland Department of the Environment; permit application and review is causing maintenance delays (that are beyond the control of MD DNR) even though funding is in place to pay for repair work. See OBS 2013.1
<p>6.5.e.1. In consultation with appropriate expertise, the forest owner or manager implements written Streamside Management Zone (SMZ) buffer management guidelines that are adequate for preventing environmental impact, and include protecting and restoring water quality, hydrologic conditions in rivers and stream corridors, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas. The guidelines include vegetative buffer widths and protection measures that are acceptable within those buffers. In the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.</p>	<p>C</p>	<p>SMZs in the eastern and western regions are mapped to include major and minor streams. Stream buffers greatly exceed the FSC requirements as confirmed through observations and map review for each site reviewed during the 2013 audit. On-site observations confirm that the mapped SMZs are protected on-the-ground during each timber harvest as mapped. SMZs were not harvested or entered with harvest equipment.</p>
<p>6.5.e.2. Minor variations from the stated minimum SMZ widths and layout for specific stream segments, wetlands and other water bodies are permitted in limited circumstances, provided the forest owner or manager demonstrates that the alternative configuration maintains the overall extent of the buffers and provides equivalent or greater environmental protection than FSC-US regional requirements for those stream segments, water quality, and aquatic species, based on site-specific conditions and the best available information. The forest owner or manager develops a</p>	<p>NA</p>	<p>Variations have not been implemented. On-site observations at each site reviewed during the 2013 audit confirm that the mapped SMZs are protected on-the-ground during each timber harvest as mapped. SMZs were not harvested or entered with harvest equipment.</p>

written set of supporting information including a description of the riparian habitats and species addressed in the alternative configuration. The CB must verify that the variations meet these requirements, based on the input of an independent expert in aquatic ecology or closely related field.		
6.5.f. Stream and wetland crossings are avoided when possible. Unavoidable crossings are located and constructed to minimize impacts on water quality, hydrology, and fragmentation of aquatic habitat . Crossings do not impede the movement of aquatic species. Temporary crossings are restored to original hydrological conditions when operations are finished.	C	Stream and wetland crossings are avoided; in fact no stream crossings were observed on any of the harvest operations reviewed during the 2013 audit.
6.5.g. Recreation use on the FMU is managed to avoid negative impacts to soils, water, plants, wildlife and wildlife habitats.	C	Gates are used to close access as needed. ORV trails were closed during the past year in response to a 2011 CAR.
6.5.h. Grazing by domesticated animals is controlled to protect in-stream habitats and water quality, the species composition and viability of the riparian vegetation, and the banks of the stream channel from erosion.	NA	Grazing is not practiced on MD DNR lands.
C6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.	C	
6.9.a. The use of exotic species is contingent on the availability of credible scientific data indicating that any such species is non-invasive and its application does not pose a risk to native biodiversity.	C	Interviews, field observations and document review confirm that non-native exotic species are not used for commercial purposes on MD DNR state forests.
6.9.b. If exotic species are used, their provenance and the location of their use are documented, and their ecological effects are actively monitored.	C	Interviews, field observations and document review confirm that non-native exotic species are not used.
6.9.c. The forest owner or manager shall take timely action to curtail or significantly reduce any adverse impacts resulting from their use of exotic species	C	Interviews, field observations and document review confirm that non-native exotic species are not used.
P8 Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.		
<i>Applicability Note: On small and medium-sized forests (see Glossary), an informal, qualitative assessment may be appropriate. Formal, quantitative monitoring is required on large forests and/or intensively managed forests.</i>		
C8.1. The frequency and intensity of monitoring should be determined	C	

<p>by the scale and intensity of forest management operations, as well as, the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.</p>		
<p>8.1.a. Consistent with the scale and intensity of management, the forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written monitoring protocol.</p>	<p>C</p>	<p>For example the SRSF Management plan describes a multi-tiered approach including a landscape-scale inventory, a stand/compartiment-level inventory and project specific assessment and research (Chapter 10 pp 111-116)</p> <p>MD DNR recently implemented a state-wide Early Detection & Rapid Response Plan designed to provide timely identification and effective treatment of small (<1/4 acre) outbreaks of invasive species on State Lands. The intent is to take a proactive approach for the protection of native community types.</p> <p>MD DNR is in the middle of its 5-year forest inventory project that documents the current status of stands. Forest inventory work is on schedule. SILVAH inventory is used for MD DNR acreage - even those that have been reserved from active timber management (e.g. ESA's or HCVF's). As described in each State Forest management plan, sample points for sensitive resources are selected through the use of random sampling or stratified random sampling. Cluster sampling is occasionally used for rare plants. This monitoring may be ongoing or of limited duration. Broader monitoring efforts are part of the program as well. Standard methods available in federal or state manuals or published peer-reviewed research are used to collect data for the following resources: water quality indicators including for example stream nutrient export, wetland condition, fish and aquatic macro invertebrate assemblages; forest stand condition indicators including for example vegetative structure and composition, invasive species, natural plant communities, insect and disease impacts, fuel loading and stand density; rare, threatened and endangered species presence, diversity and abundance; and presence of invasive species that threaten the survival of rare, threatened or endangered species; natural community diversity metrics; and other indicators of ecosystem recovery and function.</p> <p>Routine project planning observations and regular timber sale inspection reports are used effectively to monitor and document for example BMP needs and implementation and residual stand condition of harvest operations. Weekly (at least) timber sale inspection reports were reviewed for example for SR-01-11.</p>
<p>8.2. Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators: a) yield of all forest products harvested, b) growth rates, regeneration, and condition of the forest, c) composition and observed changes in the flora and fauna, d) environmental and social impacts of harvesting and other operations, and e) cost, productivity, and efficiency of forest management.</p>	<p>C</p>	
<p>8.2.a.1. For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d)</p>	<p>C</p>	<p>SILVAH inventory is used for MD DNR acreage - even those that have been reserved from active timber management (e.g. ESA's or HCVF's). As described in each State Forest management plan, sample points for sensitive resources are selected through the use of random sampling or stratified random sampling. Cluster sampling is occasionally used for rare plants. This</p>

<p>regeneration, and e) stand and forest composition and structure; and f) timber quality.</p>		<p>monitoring may be ongoing or of limited duration. Broader monitoring efforts are part of the program as well. Standard methods available in federal or state manuals or published peer-reviewed research are used to collect data for the following resources: water quality indicators including for example stream nutrient export, wetland condition, fish and aquatic macro invertebrate assemblages; forest stand condition indicators including for example vegetative structure and composition [including (a) species; (b) volumes; ((c) stocking; (d) regeneration; (e) stand composition and structure and (f) timber quality], invasive species, natural plant communities, insect and disease impacts, fuel loading and stand density; rare, threatened and endangered species presence, diversity and abundance; and presence of invasive species that threaten the survival of rare, threatened or endangered species; natural community diversity metrics; and other indicators of ecosystem recovery and function.</p> <p>As confirmed through interviews with field foresters, regeneration surveys are conducted following regeneration treatments within one or two years for loblolly in the eastern region and after 3-5 years for hardwood stands in the western region. If regeneration surveys conclude that regeneration levels are not sufficient, planting or other measures are discussed. CFI summary and the stand data collection program (SILVAH protocol) are detailed in SFMP Chapter 12. The inventory and monitoring programs are linked to a GIS-based data management system.</p>
<p>8.2.a.2. Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information shall include date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative.</p>	<p>C</p>	<p>CFI summary and current stand data collection program (SILVAH OAK protocol in the western region) provides monitoring and records as confirmed through review of SFMP Chapter 12 and interviews. For example the 160-acre gypsy moth mortality (SR-01-11) was first documented in 2009 including a salvage prescription. Records are linked to the GIS-based data management system and include dates and locations, description of the gypsy moth and ice storm incident, acreage and percent mortality estimates including maps of the affected area.</p>
<p>8.2.b The forest owner or manager maintains records of harvested timber and NTFPs (volume and product and/or grade). Records must adequately ensure that the requirements under Criterion 5.6 are met.</p>	<p>C</p>	<p>Ledgers, annual timber summaries and compartment files that relate to harvested timber are maintained in the state office.</p> <p>Records of the collection of NTFP, American ginseng (<i>Panax quinquefolius</i>) are maintained by the MD Department of Agriculture and are available to MD DNR. In the past, MD DNR implemented its own system of record keeping specific to the collection of this NTFP within each of the 3 western State Forests. More recently MD DNR's Secretary issued the following policy. Ginseng: Harvest prohibition on State Lands (March 2013).</p>
<p>8.2.c. The forest owner or manager periodically obtains data needed to monitor presence on the FMU of:</p> <ol style="list-style-type: none"> 1) Rare, threatened and endangered species and/or their habitats; 2) Common and rare plant communities and/or habitat; 3) Location, presence and abundance of invasive species; 4) Condition of protected areas, set-asides and buffer zones; 5) High Conservation Value Forests (see Criterion 9.4). 	<p>C</p>	<ol style="list-style-type: none"> 1) RTE data and monitoring is accomplished through the ID team process and an established relationship with the MD Natural Heritage Program as confirmed through interviews with Natural Heritage Program staff. 2) Common and rare plant communities and habitats are monitored through the use of SILVAH OAK inventory system. In addition, the Wildlife and Heritage Service, and Fresh Water Fisheries gather information on plant and animal populations. 3) The recently developed Early Detection and Rapid Response Plan, associated monitoring protocol and 2 associated recent research projects are led by DNR's Heritage program to monitor invasive species. SILVAH OAK inventory system also includes documentation of the presence of invasive plants. In addition, it is clear from site observations and staff interviews that the DNR staff is well-trained and knowledgeable about this issue. 4) Zones of the forest including protected HCVF, buffer zones, Wildlands, RSAs and Old Growth are monitored through stand level inventory (SILVAH OAK protocol).

<p>8.2.d.1. Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective.</p>	<p>C</p>	<p>In the eastern region, Parker Forestry completes inspection forms on Chesapeake Forest Project and MD DNR foresters also inspect tracts and fill out reports. Pocomoke State Forest inspections are completed solely by DNR forestry staff. In the western region, MD DNR field foresters conduct post-harvest monitoring and complete Timber Sale Inspection Reports that were presented and reviewed for each of the sites visited during this audit program. DNR also instituted an internal silvicultural audit system to examine the environmental and management impacts of silvicultural activities. This monitoring system has recently been expanded to include a post-harvest review by the ID team.</p> <p>However, observations on the Bowman Hill Sale/SR-01-12 (in progress) that is designed as a commercial thinning to remove mature and defective trees and thin remaining stand, stump spots are missing (or not obvious) on some cut and uncut cherry and RO stems and some large oak and cherry stems have been marked to be removed while lower quality RM are not marked for removal. While this is not a regeneration harvest, the removal of potential legacy and important seed resources in a region that struggles with RO regeneration may limit future retention options regeneration success. The ineffective use of stump spots may limit this FME’s control of silvicultural prescriptions. Monitoring by local forestry staff or by the internal silvicultural audit system did not document this situation. Excellent stump spots and prescription implementation observed at previous and subsequent sites lead auditors to conclude that the issues observed/described at Bowman Hill are an anomaly. See OBS 2013.2</p>
<p>8.2.d.2. A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.</p>	<p>C</p>	<p><u>A Forest Roads Management For Forest Operations on Maryland State Forests</u> has been developed, adopted and implemented. This policy creates a systematic inventory of the State Forest roads including ORV trails. This plan places all road segments and drainage features into a GIS-based identification system and allows the development of a priority plan for road maintenance and feature replacement that is incorporated into annual work plans for each state forest.</p> <p>A bill was introduced in the current session of the Maryland Legislature that annually adds funds into State Forest roads maintenance projects. The road inventory portion of this process has been completed as confirmed through interviews and review of the prioritization list of road inventory improvement projects. MD DNR also instituted an internal monitoring system to examine the environmental and management impacts of silvicultural activities. This monitoring system has recently been expanded to include a post-harvest review by the ID team as described elsewhere in this report.</p>
<p>8.2.d.3. The landowner or manager monitors relevant socio-economic issues (see Indicator 4.4.a), including the social impacts of harvesting, participation in local economic opportunities (see Indicator 4.1.g), the creation and/or maintenance of quality job opportunities (see Indicator 4.1.b), and local purchasing opportunities (see Indicator 4.1.e).</p>	<p>C</p>	<p>Through the ID Team and Forest Advisory Committee processes MD DNR has an effective protocol in place for monitoring and incorporating social impact assessment into management decisions. See also Section 4.4a.</p>
<p>8.2.d.4. Stakeholder responses to management activities are monitored and recorded as necessary.</p>	<p>C</p>	<p>Each forest manager responds to inquiries and complaints with direct communications. When these can’t be resolved locally the issue occasionally goes to the Annapolis office. The main mechanism for soliciting comments in response to each posted State Forest Management Plans and Annual Work Plan that details the proposed activities for the upcoming year.</p>
<p>8.2.d.5. Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural</p>	<p>C</p>	<p>MD DNR has offered this opportunity to Tribes participating in the CAC. In addition, MD DNR is cooperating with the MD Commission of Indian Affairs.</p>

significance is offered to tribal representatives (see Principle 3).		
8.2.e. The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.	C	Cost and revenue is monitored as part of the Annual Work Plan process. The current Annual Work Plan contains a summary of cost and revenue information.
C8.3. Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."	C	
8.3.a. When forest products are being sold as FSC-certified, the forest owner or manager has a system that prevents mixing of FSC-certified and non-certified forest products prior to the point of sale, with accompanying documentation to enable the tracing of the harvested material from each harvested product from its origin to the point of sale.	C	Timber sale contracts include for example location of harvest and FM/COC code, "FSC 100%" and maps of the harvested stand(s). There is no risk of mixing certified and non-certified products prior to the point of sale because each State Forest land where certified products are harvested is entirely certified. While several small parcels are not included in the certified land base, the non-certified parcels are geographically separate from the certified parcels and these non-certified parcels do not include routine harvest of timber but rather occasional demonstration or salvage projects.
8.3.b The forest owner or manager maintains documentation to enable the tracing of the harvested material from each harvested product from its origin to the point of sale.	C	Timber sale contract copies are maintained including for example CF-8-13, CF-1-13, SR-02-13, SR-01-12, Kindness Demonstration Area (a) and (b) and GR06-12, Each contract includes for example location of harvest and the FM/COC code, "FSC 100%" and maps of the harvested stand(s).
C8.4. The results of monitoring shall be incorporated into the implementation and revision of the management plan.	C	
8.4.a. The forest owner or manager monitors and documents the degree to which the objectives stated in the management plan are being fulfilled, as well as significant deviations from the plan.	C	Each annual work plan includes a table of scheduled management actions. Each annual work plan includes a text description of current and future management. Records of annual work plan goals, objectives and targets and completed activities are maintained.
8.4.b. Where monitoring indicates that management objectives and guidelines, including those necessary for conformance with this Standard, are not being met or if changing conditions indicate that a change in management strategy is necessary, the management plan, operational plans, and/or other plan implementation measures are revised to ensure the objectives and guidelines will be met. If monitoring shows that the management objectives and guidelines themselves are not sufficient to ensure conformance with this Standard, then the objectives and guidelines are modified.	C	Each State Forest Management Plan and Annual Work Plan includes revisions based on monitoring. For example in the example of the Wallman Invasive Species Control Project, Compartments 21-26, this is the 3rd year of a 5-7 multi-year backpack application of Glyphosate to control Garlic Mustard (<i>Allaria petiolata</i>). While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is considered necessary and implementation of monitoring has ensured that follow-up treatments remain part of each revised annual work plan for PGSF.

<p>P9 Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.</p> <p>High Conservation Value Forests are those that possess one or more of the following attributes:</p> <p>a) Forest areas containing globally, regionally or nationally significant: concentrations of biodiversity values (e.g., endemism, endangered species, refugia); and/or large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance</p> <p>b) Forest areas that are in or contain rare, threatened or endangered ecosystems</p> <p>c) Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control)</p> <p>d) Forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health) and/or critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).</p>		
<p>C9.4. Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.</p>	C	
<p>9.4.a. The forest owner or manager monitors, or participates in a program to annually monitor, the status of the specific HCV attributes, including the effectiveness of the measures employed for their maintenance or enhancement. The monitoring program is designed and implemented consistent with the requirements of Principle 8.</p>	C	<p>Nearly all of the State's HCVF is designated as "no management". Thus the need for regular monitoring is greatly reduced due to the lack of potential impacts although monitoring does occur in HCVF areas. As confirmed through interviews, annual work plan review and management plan review, monitoring of HCV attributes occurs through:</p> <ul style="list-style-type: none"> • Stand level inventory of the forest using SILVAH OAK methodology. • Heritage Ecologist's formal and informal surveys and research of ESA's and other designated areas.
<p>9.4.b. When monitoring results indicate increasing risk to a specific HCV attribute, the forest owner/manager re-evaluates the measures taken to maintain or enhance that attribute, and adjusts the management measures in an effort to reverse the trend.</p>	C	<p>The SFMP Chapter 10 and the current Annual Work Plans include a description of this process. Implementation of this requirement was observed for example in a recent April 2011 treatment and October 2012 follow-up of Garlic Mustard (<i>Alliaria petiolata</i>) Control Project - Wallman/Laurel Run Compartments 21-26. The current annual work plan includes this control project for the 3rd year of a possible 5-7 multi-year backpack application of Glyphosate to control garlic mustard. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary due potential impacts to the nearby weed-free ESA and HCVF communities if this non-native invasive plant is not controlled.</p>

Appendix 7 – Chain of Custody Indicators for FMEs

Chain of Custody indicators were not evaluated during this annual audit.