

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

State of Maryland DNR – Forest Service

Maryland, USA

SCS-FM/COC-00069P

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<http://dnr.maryland.gov/forests/>

CERTIFIED	EXPIRATION
29/April/2014	28/April/2019

DATE OF FIELD AUDIT
23-26/April/2018
DATE OF LAST UPDATE
22/May /2018

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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	<input type="checkbox"/> Other (expansion of scope, Major CAR audit, special audit, etc.):
Name of Forest Management Enterprise (FME) and abbreviation used in this report:				
State of Maryland DNR – Forest Service (MD DNR, DNR)				

All certificates issued by SCS under the aegis of the Forest Stewardship Council (FSC) require annual audits to ascertain ongoing conformance with the requirements and standards of certification. A public summary of the initial evaluation is available on the FSC Certificate Database <http://info.fsc.org/>.

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 this 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.

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 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 90 days after completion of the on-site audit. Section B contains more detailed results and information for the use by the FME.

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SECTION A – PUBLIC SUMMARY

1. General Information

1.1 Annual Audit Team

Auditor Name:	Beth Jacqmain	Auditor role:	FSC Lead Auditor
Qualifications:	<p>Beth Jacqmain is a Certification Forester with SCS Global Services. MS Forest Biology/Ecology from Auburn University and BS Forest Management from Michigan State University. Beth has 20+ years’ experience in the forestry field including public land management, private consulting, and private corporate. Qualified ANSI RAB accredited ISO 14001 EMS Lead Auditor and a qualified FSC Lead Auditor for Forest Management/Chain of Custody. Audited and led FSC certification and precertification evaluations, harvest and logging operations certification evaluations, and has participated in joint PEFC and American Tree Farm certifications. A 9-year member of the Forest Guild, 20 year adjunct-Faculty with Itasca Community College, Natural Resources Department. Jacqmain’s experience is in forest management and ecology; ecosystem silviculture; the use of silviculture towards meeting strategic and tactical goals; tree regeneration; forest timber quality improvement, conifer thinning operations, pine restoration, and fire ecology in conifer dominated systems. Beth has experience in forest ecology and management in the Midwest, Pacific Northwest, and the southeastern US (oak ecology in longleaf pine-wiregrass systems).</p>		
Auditor Name:	Mike Ferrucci	Auditor role:	SFI Lead Auditor
Qualifications:	<p>Mike Ferrucci is qualified as a RAB-QSA Lead Auditor (ISO 14001 Environmental Management Systems), as an SFI Lead Auditor for Forest Management, Procurement, and Chain of Custody, as an FSC Lead Auditor Forest Management and Chain of Custody, as a Tree Farm Group Certification Lead Auditor, and as a GHG Lead Auditor. Mike has led Sustainable Forest Initiative (SFI) certification and precertification reviews throughout the United States. He has also led or participated in joint SFI and Forest Stewardship Council (FSC) certification projects in nearly one dozen states and a joint scoping or precertification gap-analysis project on tribal lands throughout the United States. He also co-led the pioneering pilot dual evaluation of the Lakeview Stewardship Unit on the Fremont-Winema National Forest.</p> <p>For 12 years Mike was the SFI Program Manager for NSF – International Strategic Registrations responsible for all aspects of the firm’s SFI Certification programs. In that role Mike developed and managed one of the largest forest and chain of custody certification programs in the U.S.</p> <p>Mike has conducted Chain of Custody audits for all segments of the forest products industry, including printers, corrugated and box producers, integrated paper companies, paper distributors, solid wood mills, engineered wood products facilities, brokers, and distributors. In audits with pulp mills, corrugated producers, and box plants Mike has addressed the issues involving recycled content. Mike has also conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 33 states. Mike Ferrucci has 37 years of forest management experience. His expertise is in</p>		

	sustainable forest management planning; in certification of forests as sustainably managed; in the application of easements for large-scale working forests, and in the ecology, silviculture, and management of mixed species forests, with an emphasis on regeneration and management of native hardwood species. Mike has conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 34 states. Mike has been a member of the Society of American Foresters for over forty years. He is Past Chair of the SFI Auditor’s Forum. Mike is also a Lecturer at the Yale School of Forestry and Environmental Studies, where he has taught graduate courses and workshops in forest management, harvesting operations, professional forest ethics, private forestry, and financial analysis.
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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:	2
D. Total number of person days used in evaluation:	8

1.3 Standards Employed

1.3.1. Applicable FSC-Accredited Standards

Title
<input checked="" type="checkbox"/> Forest Stewardship Standard FSC US FM (2010)
<input checked="" type="checkbox"/> FSC Trademark Standard (FSC-STD-50-001 V1-2)
All standards employed are available on the websites of FSC International (www.fsc.org), the FSC-US (www.fscus.org) or the SCS Standards page (www.scsglobalservices.com/certification-standards-and-program-documents). Standards are also available, upon request, from SCS Global Services (www.SCSglobalServices.com).

1.3.2. SCS Interim FSC Standards

Title
<input checked="" type="checkbox"/> SCS COC indicators for FMEs, V6-0
This SCS Interim Standard was developed by modifying SCS’ Generic Interim Standard to reflect forest management in the region and by incorporating relevant components of the Draft Regional / National Standard and comments from stakeholders. More than one month prior to the start of the field evaluation, the SCS Draft Interim Standard for the country / region was sent out for comment to stakeholders identified by FSC International, SCS, the forest managers under evaluation, and the National Initiative. A copy of the standard is available at www.scsglobalservices.com/certification-standards-and-program-documents or upon request from SCS Global Services (www.SCSglobalServices.com).

2 Annual Audit Dates and Activities

2.1 Annual Audit Itinerary and Activities

Summary:

The audit team visited 32 field sites, including:

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

April 24- Tuesday: Potomac-Garret State Forest (PGSF)				
Location (AWP-codification)	FY	Notes	Managed Ac	Harvest Ac
(PG-2015-S-01) Eagle Rock – Comp 16-21 & Comp 23	2015	Tributary through center of area, 27 acre, SMZ is 50' buffer +4' every 1% grade, no equipment/no cut, in plantation setting. Some damage to residual trees. Received copy of MD DNR FS Rutting Guidelines (2013).	27	26
PG-2016-S-05 Wallman – Comp 26-5	2016	Shelterwood, marked trees to cut. Some left-over trees that had been marked for cut, DNR staff addressed with logger and the issue was market related. Acceptable within DNR system and in conformance with FSC requirements.	90	35
PG-2016-S-04 Wallman – Comp 25-30	2016	Shelterwood in ESA. Most ESAs are set-asides. This one set up due to Goshawk presence about 10 years ago (uncommon for Maryland). Met w heritage biologist who oversees raptor program. Heritage designated as critical habitat for Goshawk in southern range. Forest managers recommending treating mid-story to open for Goshawk flight. Departments of Wildlife and Heritage staff helped in layout and marking of trees for harvest. Understory thinning from below.	26	23
PG-2019-S-06-Snaggy- Comp 33-6	2019	Thinned in 2012, lots of travel in area by foresters for other activities. Over winter in developing next year annual work plan, tag those thinned w/in last 5 years. Activity scheduled to monitor for oak regen. Typically, will release oak regen when noted.	11	11
PG-2018-S-07-Snaggy-Comp 41-8	2018	Hack & spray, 18-acre treatment to remove undesired stems and encourage regeneration.	33	20
PG-2018-S-05-Snaggy-Comp 39-12	2018	Site assessed as having very good regeneration. Overstory removal being planned to release abundant regeneration (SILVAH).	16	13
April 25- Wednesday: Savage River State Forest (SRSF)				
St Johns Rock IRV Trail, Parking Lot, and Campground		Opened last year, this new ORV trail system has been carefully-designed and built to balance site protection, durability, ease of maintenance, and desired user experience.		
Braddick Road Historic Trail		This pre-revolutionary war historic trail is protected and interpreted.		
(SR-2017-S-6) Comp 1 Stands 40/42	2017	Completed hardwood thinning in a well-stocked Northern Hardwood-Oak stand lacking advanced regeneration. Confirmed high-quality timber harvest on a sloping, rocky site. Residual stand has very little logging damage. Slash and water bars have stabilized skid roads. A regeneration review in 4-5 years may allow foresters to change next planned entry if expected (but not required) sugar maple regeneration occurs.	53	43
Forest Access Road		Class 3, Status 2		

(SR-2017-S-9) Comp 11 Stand 1	2017	Completed shelterwood establishment harvest following herbicide treatment of woody vegetation from 0.5 to 4 inches dbh and selected patches of interfering sedge/grass/fern layer. The water bars were adequate but could have been better-constructed; despite many weeks of abnormally-wet weather the road has not washed out. Two crossings of small wet swales were challenging but stable, with minimal amounts of silt visible in the water.	66	63
(SR-2018-S-1) Comp 11 Stand 21	2018	Completed thinning	21	21
(SR-2016-S-21) Margroff Place – Comp 14 Stand 36	2016	Completed thinning of an overstocked 65-year-old Norway spruce plantation. Spruce seedlings, most are less than 2 feet tall, were noted but are not yet factored into silvicultural decisions because the forest hasn't developed a policy to promote them, although they are tolerated.	13	13
(SR-2016-S-22) Margroff Place – Comp 14 Stand 52	2016	Completed thinning of an overstocked mixed conifer-hardwood stand dominated by Norway Spruce, red oak and black cherry. The mountain bike trail was closed during the harvest. The trail is now open, and bikers have incorporated some of the available logging slash into the trail experience (for ramps/jumps).	5	5
(SR-2017-S-4) Comp 13 Stand 7	2017	Completed overstory removal with variable retention of 4-8 trees per acre selected mostly for wildlife habitat. Existing switchback skid roads have been stabilized using slash, water barred, and seeding. Spur access road graveled and in very good condition, with functioning drainage provisions	13	
(SR-2017-S-4) Comp 13 Stand 13	2017	Completed shelterwood establishment harvest following herbicide treatment of woody vegetation from 0.5 to 4 inches dbh and selected patches of interfering sedge/grass/fern layer.	8	
Hambone Mountain Trail		\$30,000 recreational trail grant (this is a snowmobile trail that also serves as a forest access road for management and harvesting) and previous additions of gravel were reviewed. Trail/road is in excellent condition		
Marked harvest adjacent to the Hambone Mountain Trail		Marked, uncut clearcut with oak retention.		
(SR-2017-S-10) Comp 72 Stand 5	2017	Completed thinning along New Germany Road. Culverts draining state road place sufficient water that the planned buffers were enlarged, based on guidance from Maryland Department of Environment. Logging practices protected this sensitive site and the residual stand occupying it.	23	18
(SR-2017-S-11) Comp 72 Stand 10	2017	Completed thinning along New Germany Road. Culverts draining state road place sufficient water that the planned buffers were enlarged, based on guidance from Maryland Department of Environment. Site of temporary bridge (now removed) indicates that the bridge protected the intermittent drainage including banks without any impacts to water quality.	37	23
April 26 - Thursday: Green Ridge State Forest (GRSF)				

Oldtown Orleans Road (GR-2017-S-) GR-03-17	2017	Mixed oak type. Completed variable retention harvest marked to keep co-dominants favoring quality white oaks, target 20 sq. feet/acre basal area. Last thinning done in 1990s. Discussion - Markets include pulp, logs, bridge ties, domestic firewood (non-commercial by permit only). SMZs along edges were inspected. SMZs reserved following BMPs. Result in both clustered and dispersed retention. Note: ginseng harvests have been banned in all SF.	69	43.5
Howard Road (GR-2015-S)	2015	Retention dispersed and clumped. SMZs along creeks along both edges of harvest area. Retained co-dominant WO throughout stand. Removed most overstory.	32	21.5
Adjacent GR-07-16, Howard Road (GR-2015-S) (unscheduled)		Thinning done 3-4 years ago at 44 years old. Mixed oak marked to keep.		
Mertens Ave (GR-2016-S-)	2016	Recently completed VRT, retaining large co-dominants favoring quality white oak. SMZs inspected.	73	46
Potomac Bends Wildlands, Mertens/Outdoor Club Road. HCVF (unscheduled)	ESA (HCVF)	ESA for rattlesnake and shale barrens.		
Oldtown Orleans Road (GR-2017-S-)	2017	Mixed oak and some pine. Marked not yet cut. VRT retaining marked codominants of mixed-oak. HCVF/SMZs	66	27
Oldtown/Orleans (GR-2015-S-)	2015	120-year-old mixed oak stand. Completed VRT retaining marked white and scarlet oak.	34	16

2.2 Evaluation of Management Systems

SCS deploys interdisciplinary teams with expertise in forestry, social sciences, natural resource economics, and other relevant fields to assess an FME’s conformance to FSC standards and policies. Evaluation methods include document and record review, implementing sampling strategies to visit a broad number of forest cover and harvest prescription types, observation of implementation of management plans and policies in the field, and stakeholder analysis. When there is more than one team member, team members may review parts of the standards based on their background and expertise. On the final day of an evaluation, team members convene to deliberate the findings of the assessment jointly. This involves an analysis of all relevant field observations, stakeholder comments, and reviewed documents and records. Where consensus between team members cannot be achieved due to lack of evidence, conflicting evidence or differences of interpretation of the standards, the team is instructed to report these in the certification decision section and/or in observations.

3. 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.

Significant changes occurred since the last evaluation that may affect the FME’s conformance to FSC standards and policies (*describe*):

4. Results of the Evaluation

4.1 Existing Corrective Action Requests and Observations

Finding Number: 2017.1	
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/recertification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> 12 months or next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Observation – response is optional <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	FSC-US 7.1.b, 7.1.c., and 7.1.d
<p>Non-Conformity (or Background/ Justification in the case of Observations): Continuation of OBS 2016.1, 2016.3, and 2016.4. According to interviews with FME staff, the Sustainable Forest Management Plans (SFMPs) for the Western Region are currently being revised for several reasons, including updating the information about the historical presence of conifers in the landscape and desired future conditions for these species. Some options for conifer management are being exercised as described in Annual Work Plans (AWPs), as in the case of the Northern goshawk.</p> <p>The SFMPs describe the history of land use and past management, current forest types and associated development, size class and/or successional stages, and natural disturbance regimes that affect the FMU (see Indicator 6.1.a). However, the historical presence of conifers in the management plan could be expanded to include the knowledge presented by local forestry staff in 2016, which could help set the stage for conifer objectives on the landscape.</p> <p>FME is considering expanding the use of native (e.g., Eastern white pine, Eastern hemlock, Virginia pine, Shortleaf pine, etc.) and non-native conifers (e.g., Norway spruce and Red pine) on certain sites as a wildlife management component, to restore native species (both conifer and broadleaf), and possibly to adapt to climate change and invasive pests/ pathogens. At the landscape level, FME has completed a partial assessment of the conifer cover as described in its response to OBS 2016.1, but a way to compare the county-level information from the early 1900s to today is incomplete. Information on current conifer cover on Western State Forests is complete.</p> <p>At the landscape level, the desired future condition of the native and non-native conifer component, including selection of species that will meet social, economic, and ecological objectives depending on site conditions, has not been fully completed. FME staff pointed out that maintenance of current conditions may be desirable in many instances. However, opportunities to explore connectivity between conifer cover types for wildlife movement, hydrology or other objectives could be explored.</p>	

<p>Corrective Action Request (or Observation): The FMP should describe historical ecological conditions, history of land use and past management, current forest types and associated development, size class and/or successional stages, and natural disturbance regimes that affect the FMU (see Indicator 6.1.a).</p> <p>The FME should describe a) current conditions of the timber and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions</p>	
<p>FME response (including any evidence submitted)</p>	<p><u>Documents:</u></p> <ul style="list-style-type: none"> • FSC Corrective Action Plan 2017 • Evergreen Forest Analysis of Garrett and Allegany County, sections Methodology and Evaluation <p><u>Actions:</u> An analysis was completed of “the role of conifers in the natural history, historic composition, and ecology” of Western Maryland forests. This work was included in the updates Sustainable Forest Management Plans (SFMPs) for Green Ridge (Appendix K), Savage River (Appendix J) and Potomac Garrett State Forest (Appendix J).</p> <p>FME used ESRI software and high-resolution satellite imagery, to conduct an evaluation of the current conifer cover. With this now available, FME overlaid maps of the historic conifer cover as described and mapped by Fred Besley, Maryland’s first state forester, from his inventory, book and maps entitled “The Forests of Maryland” around the early 1900.</p>
<p>SCS review</p>	<p>SFMPs were confirmed to contain the described information. ESRI mapping was examined in the GRSF office. Detailed written evaluation was provided. Reviews of provided documents and interviews with staff confirm that information about conifer distributions/abundance was derived and incorporated into management planning and staff forester training. Several ESA/HCVF sites adjacent to harvest areas were observed during the audit and confirmed to be appropriately protected from disturbance. For example, see site notes - Potomac Bends Wildlands, Mertens/Outdoor Club Road. HCVF (unscheduled stop). Actions taken by the FME and conformance confirmed during site inspections warrant closure of this Observation.</p>
<p>Status of CAR:</p>	<p><input checked="" type="checkbox"/> Closed</p> <p><input type="checkbox"/> Upgraded to Major</p> <p><input type="checkbox"/> Other decision (refer to description above)</p>

Finding Number: 2017.2	
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/recertification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> 12 months or next audit (surveillance or re-evaluation) <input type="checkbox"/> Observation – response is optional <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	FSC-US 7.1.e.
<p>Non-Conformity (or Background/ Justification in the case of Observations): Upgrade of OBS 2016.4. In 2016, the FY2017 Annual Work Plans (AWPs) were still under draft and thus the issue with incomplete AWPs was not a nonconformity. While many of the sensitive resources in question may be maintained under passive management, the AWPs are being implemented without sufficient review from Natural Heritage staff. Not only is review of options for conservation and/or maintenance of RTE species and communities an integral part of the FME’s procedures, it also is something that stakeholders expect from FSC-certified entities to conform to indicator 7.1.e. The AWPs are a component of the management plan.</p> <p>According to interviews with FME staff, of concern is the sensitive nature of some of the natural heritage information. As is the case in most states, confidential information may be excluded from publicly available documents in order to protect the resource.</p>	
<p>Corrective Action Request (or Observation): The FMP shall include a description of the following resources and outline activities to conserve and/or protect:</p> <ul style="list-style-type: none"> • rare, threatened, or endangered species and natural communities (see Criterion 6.2); • plant species and community diversity and wildlife habitats (see Criterion 6.3); • water resources (see Criterion 6.5); • soil resources (see Criterion 6.3); • Representative Sample Areas (see Criterion 6.4); • High Conservation Value Forests (see Principle 9); • Other special management areas. 	

<p>FME response <i>(including any evidence submitted)</i></p>	<p><u>Documents:</u></p> <ul style="list-style-type: none"> • Green Ridge, Savage River, and Potomac Garrett State Forests Sustainable Forest Management Plan revised 2018, chapter 7 • FSC Corrective Action Plan 2017 • Sustainable Forest Management Plans for State Forests <p><u>Actions:</u> From the FSC Corrective Action Plan 2017: The designation “Ecologically Significant Area” is used to identify unique sites that have special ecological significance. These areas have been specifically delineated and must be given careful management consideration. ESAs are areas that harbor or could potentially harbor rare, threatened or endangered (RTE) species and/or unique natural community types. These areas are also designated as High Conservation Value Forest (HCVF). Rare threatened or endangered species and/or unique natural community types fall under two categories of our HCVF definition, they are: (HCV1) Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endangered species) and (HCV3) Forest areas that are in/or contain rare, threatened or endangered ecosystems. While in Garrett and Allegany counties, Ecologically Significant Areas are generally habitat reserves and protected from forest harvest activity, some have been identified as areas that will require silviculture to enhance their unique character. A recent example is the prescriptive work done on Potomac Garrett State Forest (PGSF) to enhance conifer cover to serve as perspective goshawk nesting areas. We have discussed this work on previous audits and will see the finished work as part of the 2018 audit.</p>
<p>SCS review</p>	<p>Referenced documents were reviewed and confirmed to contain the information as described. Implementation was observed during the 2018 PGSF audit, see site notes for PG-2016-S-04 Wallman – Comp 25-30, Goshawk management site. Evidence of Natural Heritage collaboration in the assessment and prescription development was provided for this site managed for mid-story tree removal per Goshawk habitat preferences. Evidence for collaboration with other divisions was included in prescription documents. Interviews with Foresters confirm knowledge, training, and understanding of required conservation and protection reviews. Actions taken by the FME warrant closure of this CAR.</p>
<p>Status of CAR:</p>	<p><input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i></p>

4.2 New Corrective Action Requests and Observations

Finding Number: 2018.1	
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/recertification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> 12 months or next audit (surveillance or re-evaluation) <input type="checkbox"/> Observation – response is optional <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	7.2.a
Non-Conformity (or Background/ Justification in the case of Observations): Management Plans have some incidental information that is out of date. For example, the SRSF Management Plan includes the statement, "SRSF has been conducting an extensive forest inventory project for past 5 years," when the project had been completed. Several incidental, non-critical statements should be cleaned up in the updated/revised forest management plans.	
Corrective Action Request (or Observation): The management plan is kept up to date. It is reviewed on an ongoing basis and is updated whenever necessary to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances. At a minimum, a full revision occurs every 10 years.	
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)

Finding Number: 2018.2	
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/recertification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> 12 months or next audit (surveillance or re-evaluation) <input type="checkbox"/> Observation – response is optional <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	FSC-STD-50-001 V1-2, 1.15
Non-Conformity (or Background/ Justification in the case of Observations): The current timber sale contract template and associated Addenda used by MD DNR do not use the appropriate trademark symbol. Document ID is DNR/FS-352, Rev.ppc: 12/16.	

Corrective Action Request (or Observation): The use of the FSC “checkmark-and-tree” logo is directly accompanied by the appropriate trademark symbols ® or™ (in superscript font). The appropriate symbol also accompanies the first use of “FSC” and “Forest Stewardship Council” in any text.	
FME response <i>(including any evidence submitted)</i>	FME submitted eight timber sale documents and templates created with FSC labeling. FME updated documents and submitted each for approval. Approval was granted via SCS review. FME provided screen capture of those submittals on 11 June 2018.
SCS review	SCS reviewed submitted evidence, confirmed appropriate corrections were made to be in conformance, and confirmed with SCS logo use approvals internally. CAR closed 11 June 2018.
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>

5. 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:

- 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.
- 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 past evaluations, 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

None	
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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

<input checked="" type="checkbox"/> FME has not received any stakeholder comments from interested parties as a result of stakeholder outreach activities during this annual audit.	
Stakeholder comments	SCS Response
Economic concerns	
Social concerns	
Environmental concerns	

6. Certification Decision

The certificate holder has demonstrated continued overall conformance to the applicable Forest Stewardship Council 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.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments: <ul style="list-style-type: none"> Maryland DNR’s Western Region provided a number of examples of excellence in retaining stand-level wildlife habitat elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees. Snag, den and other defined wildlife trees were marked for retention within stands and all SMZs observed were sufficient to retain these stand level elements. The DNR forestry staff demonstrated strong collaborative approaches to designing forest stand prescriptions between and among State Forest Technicians and Foresters to take full advantage of the broad range of education and experience available. 	

7. Changes in Certification Scope

Any changes in the scope of the certification since the previous audit are highlighted in **yellow** in the tables below.

Name and Contact Information

Organization name	State of Maryland DNR – Forest Service		
Contact person	Jack Perdue		
Address	580 Taylor Ave, E1 Annapolis, MD 21401	Telephone	410-260-8505
		Fax	410-260-8595
		e-mail	jack.perdue@maryland.gov
		Website	dnr.maryland.gov/forests

FSC Sales Information

<input checked="" type="checkbox"/> FSC Sales contact information same as above.	
FSC salesperson	

Address	Telephone	
	Fax	
	e-mail	
	Website	

Scope of Certificate

Certificate Type	<input checked="" type="checkbox"/> Single FMU	<input type="checkbox"/> Multiple FMU
	<input type="checkbox"/> Group	
Number of FMUs in scope of certificate	1	
Geographic location of non-SLIMF FMU(s)	<i>Latitude & Longitude:</i> Savage River State Forest- 39.576, -79.129 Green Ridge State Forest- 39.631, -78.475 Potomac State Forest- 39.472, -79.439 Garrett State Forest- 39.341, -79.28 Pocomoke State Forest- 38.15, -75.487 Chesapeake Forest Lands - 38.329, -75.799	
Forest zone	<input type="checkbox"/> Boreal	<input checked="" 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 checked="" type="checkbox"/> ac		
privately managed		
state managed	211,044	
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	1
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:		
FME considers two forest regions based on regional forest types: Eastern and Western Regions. FME then divides the state forest system into four geographic districts. Under each geographic district there are state forests, which are then managed according to a state forest-level long-term management plan and annual work plan. A full description of how the FMU is divided into manageable units is available publicly via the FME’s website: http://dnr.maryland.gov/forests/ .		

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)	135,101

Area of production forest classified as 'plantation'	
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	2.4 mmbf under vol regulation, plus 780 ac under area regulation
Silvicultural system(s)	Area under type of management
Even-aged management	No changes
Clearcut (clearcut size range)	
Shelterwood	
Other:	
Uneven-aged management	No changes
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)	2.4 mmbf under vol regulation, plus 780 ac under area regulation
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:	
<p>See SFMP Chapter 5, Appendix H and CFI Summary for each State Forest. MD DNR uses Remsoft's Woodstock program to analyze forest inventory data to project sustainable harvest levels based on allowed silvicultural systems. Harvest rates are based on area control rather than volume control currently. For example, the Green Ridge SFMP includes a description of the maximum number of acres that may be treated with variable retention harvests.</p> <p>Appendix H includes a description of the assumptions behind the growth and yield modeling, including the elements of the indicator. Summaries of projected growth and allowable harvests based on growth rates, mortality, disease, etc. are included in Appendix H.</p>	
Species in scope of joint FM/COC certificate: (Scientific / Latin Name and Common / Trade Name)	
<p>Acer rubrum; Acer spp.; Carya spp.; Celtis occidentalis; Fagus grandifolia; Fraxinus spp.; Juglans nigra L.; Liquidambar styraciflua L.; Liriodendron tulipifera L.; Nyssa sylvatica Marsh; Pinus echinata; Pinus taeda; Pinus serotina; Quercus spp.; Quercus alba; Quercus rubra; Tilia americana L; Tsuga canadensis (L.) Carr.; Ulmus spp.</p>	

FSC Product Classification

Timber products

Product Level 1	Product Level 2	Species
W1 Rough Wood	W1.1 Roundwood (logs)	All
	W1.2 Fuel Wood	
	W1.3 Twigs	
W3 Wood in chips or particles	W3.1 Wood chips	All
Non-Timber Forest Products		
Product Level 1	Product Level 2	Product Level 3 and Species

Conservation Areas

Total area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives:		71,390 ac	
High Conservation Value Forest / Areas			
High Conservation Values present and respective areas:		Units: <input type="checkbox"/> ha or <input type="checkbox"/> ac	
Code	HCV Type	Description & Location	Area
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;	15,226
		Ecologically Significant/Wildlands - Western region	16,656
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.		
HCV3	Forests or areas that are in or contain rare, threatened or endangered ecosystems.	Core FIDs habitat; core DFS habitat – Eastern region;	18,484
		old growth and old growth management – Western region	24,874
HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	Riparian Buffer Areas – Eastern region;	38,274
		Riparian Buffer Areas – Western region	2,145
HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).		
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
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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:	The State Forests listed below have very little silvicultural activity and are relatively small in acreage.	
Control measures to prevent mixing of certified and non-certified product (C8.3):	These additional properties are not located near the areas included in the current or expanded certification scope. Harvesting is very limited and usually for salvage or demonstration. These properties are not allowed to use the FSC certificate or license codes and there is no risk of mixing forest products.	
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, Cecil	3,380
Cedarville State Forest	Brandywine, MD, Prince Georges	3,625
Doncaster Demonstration Forest	Ironsides, MD, Charles	1,953
Stoney Demonstration Forest	Aberdeen, MD, Harford	318
Salem State Forest	Leonardtown, MD, St Mary’s	837

8. Annual Data Update

8.1 Social Information

Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):		
# of male workers	34	# of female workers 10
Number of accidents in forest work since last audit:	Serious: # 0	Fatal: # 0

8.2 Annual Summary of Pesticide and Other Chemical Use



FSC_MD_PesticideR
pt_2018.xls

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 – List of Stakeholders Consulted

List of FME Staff Consulted

Opening Meeting Date: April 24, 2018

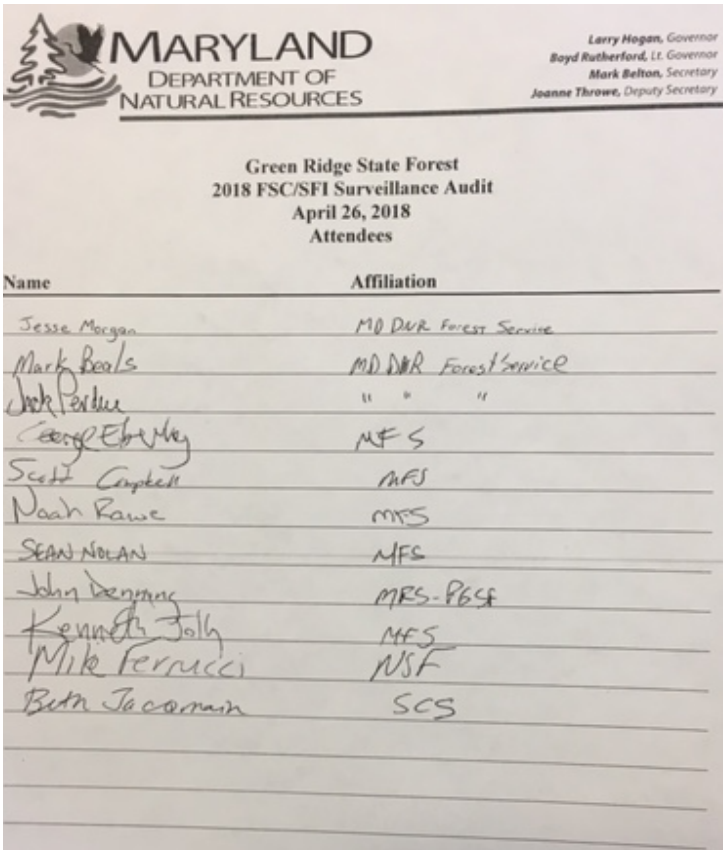
Closing Meeting Date: April 26, 2018

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

Name	Affiliation
1. Scott Campbell	MFS - Savage River State
2. Michael Johnson	MFS - Savage River State
3. Noah Kauer	MFS - Potomac Creek S.F.
4. Vanessa Foy	MFS - SRSF
5. Charles L. Bayle	SRSF
6. [Handwritten Name]	SRSF
7. [Handwritten Name]	SRSF
8. Ashley Moreland	SRSF
9. Mark Beaks	MFS - GRSF
10. Jesse Morgan	MFS - GRSF
11. John Deming	MFS - ABSF
12. Emily Walsh	OUS
13. [Handwritten Name]	MFS
14. SEAN NOLAN	MFS SAVAGE RIVER
15. Mike Ferruci	MFS
16. Alexander Clapp	MFS CFCRSF
17. M. Fee Schuster	MFS
18. Rip Powers	MFS
19. Kenneth Jolin	MFS
20. Jack Harder	MFS
21. Brian Tappin	

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

NAME	UNIT
Joyce Stoner	Forest Service
Jim A	Forest Service
Shawn Stetson	Forest Service
George Eberly	MFS
June Morgan	MFS
STEVE NOLAN	MFS
Beth Tacarrone	SCS
Kenneth Tally	MFS
Jack Verdine	MFS
Rob Felty	MFS
Kip Pavlen	MFS
Mike Ferrucci	USF
Rock Beals	MFS
Noah Kane	MFS
Bo Sliger	MFS
Alexander Clark	MFS
Mike Schatzel	MFS
Scott Campbell	MFS
John Danning	MFS
Jason SARGENT	MFS



List of other Stakeholders Consulted

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.
Nil				

Appendix 3 – Additional Audit Techniques Employed

- None.
- Additional techniques employed (*describe*):

Appendix 4 – Pesticide Derogations

There are no active pesticide derogations for this FME.

Appendix 5 – Detailed Observations

Criteria required by FSC at every surveillance NA – all FMUs are exempt from these requirements.

audit (check all situations that apply)	<input type="checkbox"/> Plantations > 10,000 ha (24,710 ac): 2.3, 4.2, 4.4, 6.7, 6.9, 10.6, 10.7, and 10.8 <input checked="" type="checkbox"/> Natural forests > 50,000 ha (123,553 ac) ('low intensity' SLIMFs exempt): 1.5, 2.3, 3.2, 4.2, 4.4, 5.6, 6.2, 6.3, 8.2, and 9.4 <input checked="" type="checkbox"/> FMUs containing High Conservation Values ('small forest' SLIMFs exempt): 6.2, 6.3, 6.9 and 9.4
Documents and records reviewed for FMUs/sites sampled	<input checked="" type="checkbox"/> All applicable documents and records as required in section 7 of audit plan were reviewed; or <input type="checkbox"/> The following documents and records as required in section 7 of the audit plan were NOT reviewed (provide explanation):

Evaluation Year	FSC P&C Reviewed
2014	All – (Re)certification Evaluation
2015	1.3, 1.5, 1.6, 2.3, 3.1, 3.2, 3.4, 4.2, 4.4, 5.6, 6.2, 6.3, 6.5, 6.6, 6.9, 7.1, 7.2, 7.4, 8.2, 8.3 (COC indicators for FMEs) and 9.4
2016	1.1, 1.2, 1.4, 1.5, 2.3, 3.2, 4.1, 4.2, 4.3, 4.4, 4.5, 5.5, 5.6, 6.2, 6.3, 6.7, 6.8, 6.9, 6.10, 7.3, 8.2 and 9.4
2017	See also mandatory Criteria; and 2.1, 2.2, 3.3, 6.1, 8.1, 8.4, and 8.5.
2018	See also mandatory Criteria above; and 5.1, 5.2, 5.3, 5.4, 6.4, 9.1, 9.2, and 9.3.

C= Conformance with Criterion or Indicator
 NC= Nonconformance with Criterion or Indicator
 NA = Not Applicable
 NE = Not Evaluated

Abbreviations for Maryland DNR State Forests which may be used in this checklist:

CF/PSF = Chesapeake Forest / Pocomoke State Forest DFS = Delmarva Fox Squirrel ESA = Ecologically Significant Area FIDS = Forest Interior Dwelling Species NGSP = New Germany State Park PGSF = Potomac-Garret State Forest GRSF = Green Ridge State Forest	S/FMP = Sustainable/ Forest Management Plan SRSF = Savage River State Forest ROW = Right-of-way RTE = Rare, threatened or endangered NRP = Natural Resources Police
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REQUIREMENT	C/ NC	COMMENT/CAR
Principle #1: Compliance with Laws and FSC Principles		
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.		
1.1 Forest management shall respect all national and local laws and administrative requirements.	NE	
1.2. All applicable and legally prescribed fees,	NE	

royalties, taxes and other charges shall be paid.		
1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	NE	
1.4. 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.	NE	
1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.	C	
1.5.a. The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the <i>Forest Management Unit</i> (FMU).	C	FME has a department of Natural Resources Police (NRP) that regularly patrol state lands to prevent and detect unauthorized activities. In addition, FME gates roads and posts signage that cites applicable laws and regulations.
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.	C	FME did not report any significant illegal or unauthorized activities since the last audit. Per interviews with staff, FME's NRP prosecutes or fines violators. NRP also works with local law enforcement to deal with more complex situations involving illegal activities, such as marijuana operations. FME staff regularly clean up dump sites to avoid attraction. Interviews with staff indicate that outside of this occasional dumping, there have been no major illegal or unauthorized activities.
1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.	NE	
Principle #2: Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.		
2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.	NE	
2.2. 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.	NE	
2.3. 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 <i>disputes</i> arise regarding tenure claims or use	C	FME staff reported no new disputes over 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.		rights. Unlike prior years there are currently no encroachment issues. Each state forest maintains its own records, but the land planning office may become involved in reviewing records and survey information. FME’s lawyers at headquarters review boundary disputes and encroachment and take the final actions to resolve these issues.
2.3.b The forest owner or manager documents any significant disputes over tenure and use rights.	C	
Principle #3: The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.		
3.1. Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.	NE	
3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.	NA	
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 resources or rights.	NA	There are no tribal forest management or ownership/ use rights on FME lands. There are no sites of special tribal significance on the certified FMU. There are no tribes with legal rights or binding agreements to the FMU, as confirmed through interviews with staff and review of tenure documents under C2.1.
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.	NA	Routine communication with Chiefs in regard to management activities and public posting of AWP’s on the forest web site. FME staff reported that activities in 2017-2018 did not affect any tribal issues.
3.3. 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.	NE	
3.4. 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.	NE	
Principle #4: Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.		
4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.	NE	
4.2. Forest management should meet or exceed all	C	

<p>applicable laws and/or regulations covering health and safety of employees and their families.</p>		
<p>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).</p>	<p>C</p>	<p>Once incident with a contract logger does not qualify under DNR system. Inspection sheets recorded 2 July 2017, Wallman complex sale. Documented incident with logger, notified up the chain of command. DNR staff were on-site after EMS on scene to escort off-site but EMS crew had already left. Staff followed up as appropriate.</p> <p>FME reported no other accidents or safety incidents since the last audit, and that there have been no changes to health & safety regulations or contract templates. OSHA postings were observed in all state forest offices. Per interviews with FME staff, all are aware of health and safety laws and receive regular training on the subject. Training records were provided for FME staff and staff of contractors (e.g., Parker Forestry Staff Training - March 24, 2015 thru April 21, 2017).</p> <p>Auditors examined personnel files maintained at Potomac-Garret State Forest, which contain training records such as EMS, pest, fire certification, FEMA, state forestry licenses, first aid and CPR, FEMA, wildland fire, trail design & construction, Erosion control training. Tracked for CFEs for SAF and to maintain state license issued by Department Labor License and Regulation. Auditors confirmed pesticide applicators' licenses for two qualified staff at the Potomac-Garrett State Forest (John Denning, 30327-36483; Jason Savage 30327).</p> <p>Review PPE, list of pesticides allowed. MSDS and labels have paper copies in storage shed. Will post signs for spray areas depending on chemical, target, and amount of residential. GPS sites and Rx with maps for spray sites includes: date, herbicide, target, applicator, date.</p>
<p>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.</p>	<p>C</p>	<p>Evidence of safe felling techniques were observed in the field on stumps and use of slash on skid trails. Contracts contained required safety language.</p>
<p>4.2.c The forest owner or manager hires well-qualified service providers to safely implement the management plan.</p>	<p>C</p>	<p>Through use of a competitive bidding system and use of strict contracts that include logger licensing and safety requirements, FME ensures that it uses qualified service providers. Evidence: contracts for all timber sales.</p>
<p>4.3 The rights of workers to 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>NE</p>	
<p>4.4. Management planning and operations shall</p>	<p>C</p>	


<p>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>		
<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, recreation and health; • Community economic opportunities; • Other people who may be affected by management operations. <p>A summary is available to the CB.</p>	<p>C</p>	<p>The Annual Work Plan and ID Team processes are examples of planning efforts that allow for consideration of social impacts as described in this indicator. FME most recently updated its social impacts summary in 2015.</p> <p>According to interviews with FME staff, Western State Forests have engaged in cooperative project with Frostburg State University to carry out a Recreation/Tourism Economic Impact Study, with survey work was done spring of 2017 and through the calendar year.</p>
<p>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.</p>	<p>C</p>	<p>PGSF provided 3 years of operational work plans: FY 2016, 2017, 2018. For example, comments regarding the FY-18 Annual Work Plan were received via e-mail, phone calls and letters.</p> <p>FME reported that few comments have been received from stakeholders since the last audit on other State Forests. Most comments are received during the Annual Work Plan (AWP) review process from the Citizens Advisory Committees. SCS reviewed complaints log at GRSF. No reports or discovery of unresolved complaints during the 2018 audit.</p>
<p>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.</p>	<p>C</p>	<p>Refer to 4.4.b.</p>
<p>4.4.d For <i>public forests</i>, consultation shall include the following components:</p> <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 	<p>C</p>	<p>Refer to 4.4.b.</p>

<p>planning decisions is available. 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.</p>		
<p>4.5. 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, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.</p>	NE	
<p>Principle #5: 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>C5.1. Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.</p>	C	
<p>5.1.a. The forest owner or manager is financially able to implement core management activities, including all those environmental, social and operating costs, required to meet this Standard, and investment and reinvestment in forest management.</p>	C	<p>MD DNR receives multiple funding sources, including general funds (taxes), timber sale income, and grants. The agency undergoes legislative audits in which its costs and income for its management programs are reviewed in detail. MD DNR undergoes an annual budgeting process through the State Legislature. MD DNR expanded the scope of its FSC/SFI certificates in 2011, thus demonstrating reinvestment in the amount of forest available for sustainable forestry marketing/ declarations. In 2016, MD DNR has received funding for its road program (\$900,000) in 2016 and had several open recreational trail programs. During the 2018 audit, DNR reports receiving budgeted amount of \$300,000/year for necessary maintenance. Inspections of new road and trail construction demonstrated implementation and inspection of planned road projects demonstrated commitment to required road maintenance.</p>
<p>5.1.b. Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.</p>	C	<p>MD DNR managers stated the budget continues to be stable. ORV trail maintenance is receiving some of its funding through the permits issued. Other annual fixed costs have been considered in the ORV budget.</p>
<p>C5.2. Forest management and marketing operations should encourage the optimal use and local processing of the forest’s diversity of products.</p>	C	
<p>5.2.a. Where forest products are harvested or sold, opportunities for forest product sales and services are given to local harvesters, value-added processing and manufacturing facilities, guiding services, and other operations that are able to offer services at competitive rates and levels of service.</p>	C	<p>Timber sales are open to all local bidders. Forest managers attempt to maximize both local processing and processing to highest available value. MD DNR maintains lists of operators for both regions and ensures that they are informed of upcoming timber sales (see Bid and Opening Witness forms; local logging contractor lists). All products are processed in</p>

		<p>local mills.</p> <p>State Forests establish minimally acceptable bids so that in case of down markets, products are not being harvested at a loss to the state.</p>
5.2.b. The forest owner or manager takes measures to optimize the use of harvested forest products and explores product diversification where appropriate and consistent with management objectives.	C	<p>In the Western Region, there are opportunities for high grade lumber, chips, and fence rail and pulp products. In the Western Region, harvested products may end up in local hardwood lumber, pulp or pallet mills. Some sales go to firewood. Local mills may conduct additional marketing of higher grade logs for veneer markets once they have acquired legal possession.</p> <p>Diameter limit on conifers (white pine) due to market conditions.</p>
5.2.c. On public lands where forest products are harvested and sold, some sales of forest products or contracts are scaled or structured to allow small business to bid competitively.	C	<p>Firewood contracts are done in the Western Region so that small operations can take advantage of local firewood markets. MD DNR also has small-sale contracts that allow small businesses have the opportunity to competitively bid on projects. An example of this in the Western Region is a block sale, in which payments are allowed to be broken down into a multiple-payment schedule. This allows smaller operators to competitively bid and make smaller payments as income is received.</p>
C5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.	C	
5.3.a. Management practices are employed to minimize the loss and/or waste of harvested forest products.	C	<p>In the Eastern Region, equipment is selected (e.g., processors, feller-bunchers) that allows for greater utilization of the lower portion of sawlogs.</p> <p>In the Western Region, salvage harvests were conducted in due time as to capture the value of severely damaged trees as reported in 2017. This practice continues in 2017. During the 2018 audit interviews with staff and examination of sale prospectus documents confirm practices to design sales for minimal loss of value and maximum utilization. Use of contractors who actively merchandise also helps meet this indicator. Interviewed foresters confirm knowledge of local market conditions and understanding of new market development in their areas.</p> <p>In all cases, logs are transported prior to any chances for rotting or other damage to occur.</p>
5.3.b. Harvest practices are managed to protect residual trees and other forest resources, including:	C	<p>Rutting Guidelines For Forest Operations and Forest Stand Retention For Forest Operations on Maryland State Forests are</p>

<ul style="list-style-type: none"> soil compaction, rutting and erosion are minimized; residual trees are not significantly damaged to the extent that health, growth, or values are noticeably affected; damage to NTFPs is minimized during management activities; and techniques and equipment that minimize impacts to vegetation, soil, and water are used whenever feasible. 		<p>in place and enforced.</p> <p>No rutting exceeding guidelines were observed during the 2018 audit. Interviews with staff confirmed working knowledge of requirements or ability to quickly locate guidance documents and routine use of that knowledge.</p>
<p>C5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.</p>	C	
<p>5.4.a. The forest owner or manager demonstrates knowledge of their operation’s effect on the local economy as it relates to existing and potential markets for a wide variety of timber and non-timber forest products and services.</p>	C	<p>The state forests offer a diverse opportunity for harvesting forest products including herbs (unless listed as a protected or prohibited species), firewood, etc. Hunting, fishing, hiking, and other recreational activities on the State Forests attract user groups to local businesses, as reported by several MD DNR employees interviewed.</p> <p>State Forest managers maintain knowledge of local markets for forest products.</p> <p>The Maryland Forest Service is working to improve markets for forest products, particularly markets related to bioenergy.</p>
<p>5.4.b The forest owner or manager strives to diversify the economic use of the forest according to Indicator 5.4.a.</p>	C	<p>In response to recreational user groups, such as mountain bikers (Eastern) or ORV enthusiasts (Western), MD DNR has expanded or established trail networks. Examined during the 2018 audit was a new trail established in response to recreational demands (see below). These user groups are likely to use local businesses for lodging, food, fuel, and other needs.</p> <p>During the 2018 audit, new trail construction was examined. The St. Johns Rock ORV trail in Savage River SF opened July 2017. DNR installed campsites, kids’ trails, and a “rock crawl” challenge site for ORVs.</p>
<p>5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.</p>	NE	
<p>5.6. 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</p>	C	<p>FME calculates the AAH for each State Forest in the scope.</p> <p>Of each State Forest, only one has reported changes in its calculated AAH: SRSF has been conducting an extensive forest inventory project finished in 2016. Initial inventory work was</p>

<p>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 other factors that affect net growth; • 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>completed on the harvestable areas of SRSF and the analysis of this data will be the basis for any changes that may be necessary in adjusting the annual allowable harvest rate.</p> <p>See SFMP Chapter 5, Appendix H and CFI Summary for each State Forest. FME uses Remsoft’s Woodstock program to analyze forest inventory data to project sustainable harvest levels based on allowed silvicultural systems. Harvest rates are based on area control rather than volume control currently.</p> <p>Appendix H includes a description of the assumptions behind the growth and yield modeling, including the elements of the indicator. Summaries of projected growth and allowable harvests based on growth rates, mortality, disease, etc. are included in Appendix H.</p> <p>In 2017, FME recently completed updated modelling for the Eastern Region using forest inventory data and site indexes modeled using REMSOFT’s software. The model considers growth rates, site quality, current age/ size class, species composition, management zone, operability, management constraints such as FIDS, ESAs and DFS, silvicultural practices, and objectives.</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>NGSP = New Germany State Park PGSF = Potomac-Garret State Forest GRSF = Green Ridge State Forest</p> <p>2017: GRSF — The allowable harvest within the GRSF General Forest Area is to manage 200 acres per year for end of rotation regeneration harvests. FME regenerated 200 acres since the last audit. SRSF — See Appendix 3 in the Savage River State Forest FY 2017 Annual Work Plan. 1.0 MMBF planned, 941,285 actual. PGSF — 634 MBF planned, 542 MBF actual CF/PSF — Thinning acreage was slightly below AAH, final and uneven-aged harvest acreage (clear cuts, variable retention, seed tree, shelterwood) was well below our AAH, as confirmed in records (see Timber Sale Summary for all State Forests).</p> <p>2018: Each State Forest maintains an annual work plan summary to compare actual acres harvested versus projected (e.g., http://dnr.maryland.gov/forests/Pages/workplans.aspx). Harvest levels on an area control basis remain well below what is allowed per the Woodstock model. Each State Forest also prepares quarterly harvest reports, which were reviewed</p>

		<p>during the audit. Timber Harvest Summaries (PDF) for CF-PSF, GRSF, PGSF, and SRSF were inspected and included data <i>by Fiscal Year for Harvest Bd. Ft Vol. and Harvested Gross Value of sale.</i></p> <div style="text-align: center;">  SF Quarterly Report ALL-WMD FY18-3Q N </div> <p>Refer also to</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>AWP planning is done by the Forest Manager and staff. Notes on future management activities, such as silvicultural treatments or TSI, are incorporated into the forest GIS.</p>
<p>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.</p>	<p>NA</p>	<p>There is no significant harvest of NTFPs on the FMU, as confirmed in field visits and interviews with FME staff.</p> <p>Hunt leases are used only on the Chesapeake State Forest. The meat acquired is not commercially sold and is not commercially significant.</p>
<p>Principle #6: 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.</p>		
<p>6.1. Assessments of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.</p>	<p>NE</p>	
<p>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,</p>	<p>C</p>	

<p>trapping, and collecting shall be controlled.</p>		
<p>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.</p> <p>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.</p>	<p>C</p>	<p>Wildlife and Heritage biologists are important members of the Interdisciplinary Team (IDT) review team for each of the state forests. They provide critical information important to the ultimate management decisions made by the State Forest managers and their annual work plans. Rare, threatened and endangered species are recorded in the Heritage database. Heritage biologists are involved in planning, review and approval for each management prescription and sometimes working directly with the manager in the final boundaries established for a forest harvest to ensure the species of concern and their habitat are properly protected. RTE species protection and management are included in the Forest Management Plan, AWP Forest Harvest Proposal, and GIS. Each AWP silvicultural proposal has a defined "Description/Resource Impact Assessment" which includes information for: Location, Forest Community Type and Condition, Interfering Elements, Historic Conditions, Rare/Threatened/Endangered Species and Habitats, Species of Management Concern, Water Resources, Recreation Resources and Soil Resources. Monitoring efforts follow each management activity that could affect RTE species or their habitats including monitoring of the effects of restoration treatments.</p>
<p>6.2.b When RTE species are present or assumed to be present, modifications in management are made in order to maintain, restore 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>C</p>	<p>FME reported the following activities near RTE species habitat zones:</p> <p>Refer to individual Annual Work Plans (AWPs) and the management recommendations for each state forest; all conservation zones and/or protected areas are shown on each project map.</p> <p>Forest harvests have occurred in areas that are potential habitats for RTE species. All harvests must go through the annual work plan process. Heritage assists the FME during planning and implementation to ensure that the goals that they have for target species are met. Each year FME includes a location reporting form and information fact sheet along with its standard hunting harvest report forms to each of the local hunt clubs regarding Delmarva Fox Squirrel on the Maryland short. Any forms that FME receives back are sent to US Fish & Wildlife, DNR Wildlife & Heritage, and kept on file at FME offices.</p>
<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>The requirements of this section of the standard are primarily accomplished through the ID team process, which includes reviews of all plans by heritage, wildlife, fisheries, and forestry staff. Harvest operations and restoration projects are reviewed by Heritage members of the ID team. Restoration</p>

		projects for specific sites are listed within each Annual Work Plan.
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).	C	FME staff reported that there have been no cases of harvest or take of RTE species or significant damage to vulnerable species and communities on the FMU. Refer to AWP's and the management recommendations as all ESAs are shown per project maps. See also information presented in 6.2.b on hunting of game species (e.g., deer) within Delmarva Fox Squirrel habitat.
6.3. 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.	C	
6.3.a.1 The forest owner or manager maintains, enhances, and/or restores under-represented <i>successional</i> 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.	C	FME reported the following: <ul style="list-style-type: none"> • GRSF — Early succession stages are most under-represented on this state forest, so regeneration harvests do the most to maintain young forests. • SRSF — The seedling/sapling succession stage of our hardwood forests could be considered underrepresented. As such, management work planned within the Annual Work Plans is generally focused on regeneration of hardwood forests and enhancing this stage of forest growth. Early successional habitat including grass and shrub dominated acreage is also underrepresented across the forest landscape. Cooperative efforts with the Wildlife Division of DNR will maintain over 150 acres of recent land acquisitions in this habitat. Further acquisitions composed of this habitat type are in review and may potentially broaden the occurrence of this habitat niche on the forest. • PGSF — See PGSF FY-17 AWP for VII. Watershed Protection Comp 19 Lostland Run HWA Mitigation /Red Spruce Planting small (1acre. annual) Native Red Spruce planting. Long standing Hemlock Protection Program with MDA; involving IPA approach to hemlock protection/preservation in important stands. • CF/PSF - Prescribed fire has been used to maintain open and early successional areas on the FMU (i.e. Brookview ponds, Powell Rd ESA, Furnace lupine site, etc.)
6.3.a.2 When a <i>rare ecological community</i> is present, modifications are made in both the management plan and its implementation in order to maintain, restore or enhance the viability of the community. Based on the vulnerability of the existing community, <i>conservation zones</i> and/or <i>protected areas</i> are established where warranted.	C	FME demonstrates exceptional efforts to identify rare ecological communities for protection, management and/or restoration. During harvests visited in 2018, ESAs and other protected areas were noted on maps when adjacent or within timber sale boundaries. Critical habitats have been mapped for state listed or

		<p>uncommon species, shale barrens communities, old growth and potential old growth, vernal pools and unique open habitats in state forest management plans. In most cases, these areas are not entered with equipment.</p> <p>Per interviews with staff, for early successional habitat that is not well-represented on the landscape, FME is attempting to coordinate more opportunities to combine timber sale and prescribed fire layout to reduce costs.</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 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. 	<p>C</p>	<p>FME staff reported that there have been no harvests or other activities that have significantly affected old growth stands.</p>

<p>2. A history of forest stewardship by the tribe exists.</p> <p>3. High Conservation Value Forest attributes are maintained.</p> <p>4. Old-growth structures are maintained.</p> <p>5. Conservation zones representative of old growth stands are established.</p> <p>6. Landscape level considerations are addressed.</p> <p>7. Rare species are protected.</p>		
<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>	C	<p>The AWP for each state forests contains as one its primary objectives toward Wildlife Habitat: management activities with a purpose to maintain and enhance the ecological needs of the diversity of wildlife species and habitat types.</p> <p>FME staff reported the following:</p> <p>GRSF — The FY2018 AWP Special Wildlife Habitat Projects include: Continue Implementation of the Kirk Orchard, Anthony’s Ridge, and Kasecamp Bottoms, and Town Creek Special Wildlife Habitat Plans, Continue Rotational mowing and brush management in approved grasslands and other wildlife openings and Create and manage a 2 acre pollinator meadow in the Town Creek Special Wildlife Habitat Area to serve as a demonstration area for pollinator management.</p> <ul style="list-style-type: none"> • SRSF — AWP FY2018 VII. Margraff Plantation Sunflower Field to provide enhanced dove feeding grounds. Also, about 16 acres of wildlife specific project have been implemented. All planned and completed timber harvests include wildlife habitat improvement elements by creating an increase in early succession habitat critical to a variety of species in need of conservation including golden-winged warblers, American woodcock, etc. • PGSF — See PGSF FY18-AWP IX. Wildlife Management. Proposals: • Comp 41-8 is a one-acre wildlife opening managed to provide feeding, brooding foraging areas. • CF/PSF — Planning and execution of the early successional habitat project on the Foster tract continues.
<p>6.3.c Management maintains, enhances and/or restores the plant and wildlife habitat of Riparian Management Zones (RMZs) to provide:</p> <p>a) habitat for aquatic species that breed in surrounding uplands;</p> <p>b) habitat for predominantly terrestrial species that breed in adjacent aquatic 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>	C	<p>Watershed protection/improvement is addressed throughout each of the state forests AWP through forest harvest planning and review to implementation and including specific projects to improve and protect water resources.</p> <p>FME reported the following:</p> <ul style="list-style-type: none"> • GRSF — Continue to establish and enhance riparian buffers along Town Creek with volunteer tree planting projects. Non-invasive tree and shrub species will be planted to establish forest buffers and enhance wildlife habitat. • SRSF — Annual Work Plan maps reference no cut buffers on blue line streams and wetlands as well as Maryland’s

		<p>Best Management Practices that are implemented on all silvicultural activities to ensure the preservation of water quality in adjacent waterways.</p> <ul style="list-style-type: none"> PGSF — Comp. 19 – Lostland Run HWA Mitigation/Red Spruce Planting Proposal (Extension FY-12 Proposal) CF/PSF — Work continues on the Indiantown/Brookview Ponds watershed improvement project from the FY2013 AWP.
<p>Stand-scale Indicators 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>	C	<p>As confirmed in field site visits, all harvests in the Western Region include retention of oak and larger diameter legacy pine trees. Some harvests include pine seed trees of species that occur naturally on the site, especially in the case of pond, pitch, and short-leaf pines. Other hardwoods, such as maples, poplars, and gums, are mostly retained in no-harvest zones and SMZs, as well as within production areas during thinnings. Bald cypress was observed in SMZs, which are typical sites for this species. Recent landscape analyses have provided support for continued efforts to retaining conifers for tree and wildlife habitat diversity.</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>	C	<p>Seed mixes are determined by MD Department of Wildlife and addressed in timber harvest contracts (Attachment E; medium red clover, ladino clover, orchard grass, perennial rye grass, and timothy grass).</p> <p>MD DNR generally does not plant except small areas for red spruce. One 4-acre planting was discussed during the 2018 audit.</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> <ol style="list-style-type: none"> 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 vertical and horizontal complexity. <p>Trees selected for retention are generally representative of the dominant species found on the site.</p>	C	<p>As confirmed in field site visits, all harvests in the Western Region include retention of oak and larger diameter legacy pine trees. Some harvests include pine seed trees of species that occur natural on the site, especially in the case of pond, pitch, and short-leaf pines. Other hardwoods, such as maples and gums, are mostly retained in no-harvest zones and SMZs. Snags were observed on several harvests with harvest areas and in no-harvest zones. Woody material is retained for use on skid trails to control erosion and compaction and distributed over harvest sites. All tree species selected for retention are of dominant species of the site.</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>	C	<p>2018:</p> <p>FME reported the following even-aged harvests:</p> <ul style="list-style-type: none"> GRSF - All even-aged regeneration harvests carried out this year were completed under principles of variable retention. 154 acres have been harvested on 258 of managed land.

<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>		<ul style="list-style-type: none"> • SRSF — Approximately 103 acres of even aged harvests were completed on 153 management unit acres. 43 acres of mature hardwood were regenerated on two stands of 21, and 22 acres. The remaining even aged management occurred on 60 acres of the 1st first cut of a two-age shelterwood system. Retention objectives were met for each harvest with more than 5% of the original stand being retained. Buffers implemented along Streamside management zones, utilities, and HC VF ensured that retention targets would be met in each silvicultural operation. Refer to the FY-18 Annual Work Plan as well as the final timber harvest contracts for buffer/exclusion delineations. • PGSF — Approximately 226 acres of even aged harvests were completed on 327 management unit acres. 38 acres of mature hardwood were regenerated on two stands of 23, and 15 acres. The remaining even aged management occurred on 188 acres of the 1st first cut of a two-age shelterwood system. • CF/PSF — 38.2 acres were regenerated with an average of 19 acres.
<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 quality, and other values compared to the normal opening size limits, including for sensitive and rare species. 5. Is reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings. 	<p>NA</p>	<p>No exemptions to even-aged management restrictions associated with indicator 6.3.g.1 and its applicable regional sub-indicators were detected during field visits or review of management planning documentation.</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 invasive species, including:</p> <ol style="list-style-type: none"> 1. a method to determine the extent of invasive 	<p>C</p>	<p>FME reported the following: The 2018 Pesticide Use Report noted several projects that were directed at controlling invasive plant species including callery pear, Japanese knotweed, ailanthus and mile-a-minute.</p> <ul style="list-style-type: none"> • GRSF — Ailanthus was treated in stands prior to harvest in

<p>species and the degree of threat to native species and ecosystems;</p> <ol style="list-style-type: none"> 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>stands that it was known to exist, and ailanthus was treated in special wildlife habitat areas. Furthermore, mowing occurred in old field areas where invasive shrubs exist to prevent establishment of these shrubs such as bush honeysuckle, autumn olive and multi-flora rose.</p> <ul style="list-style-type: none"> • SRSF — treated and is monitoring several plant colonies or sites including: Japanese Knotweed sites, Tree of Heaven sites, Mile-A-Minute sites and Yellow Archangel sites. • PGSF — See PGSF FY18-AWP VIII Ecosystem Restoration /Protection Projects; note control or monitoring done on 19 NNIS spot treatments, (ref. herbicide application record.) • CF/PSF — Mapping updates of known and new invasive locations, herbicide applications on high recreation use areas to slow the spread of invasive vegetation.
<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>	C	<p>FME reported the following:</p> <ul style="list-style-type: none"> • GRSF — No prescribed fire in past year. One wildfire burned approximately 2 acres in the Kirk Orchard area. No natural fires occurred. • SRSF — One wildfire (arson) totaling 8.5 acres in Compartment 58. • PGSF — None • CF/PSF — Multiple prescribed burns have been completed on various sites. The majorities were in or near ESA Zone 1 areas.
<p>6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.</p>		
<p>6.4.a. The forest owner or manager documents the ecosystems that would naturally exist on the FMU, and assesses the adequacy of their representation and protection in the landscape (see Criterion 7.1). The assessment for medium and large forests include some or all of the following: a) GAP analyses; b) collaboration with state natural heritage programs and other public agencies; c) regional, landscape, and watershed planning efforts; d) collaboration with universities and/or local conservation groups.</p> <p>For an area that is not located on the FMU to qualify as a Representative Sample Area (RSA), it should be under permanent protection in its natural state.</p>	C	<p>The Representative Sample Area (RSA) exercise is complete as confirmed by GIS review, interviews and management plan review and review of “<i>Methodology for Locating Representative Sample Areas (RSA) for Naturally Occurring Ecosystems within the Region of Maryland State Forests</i>”. This methodology was developed in cooperation with MD DNR Natural Heritage Program. This GAP analysis is based on the spatial analysis of the surrounding. Ecosystem data is complete as confirmed through interviews and data review. MD DNR met with Natural Heritage and identified the presence/absence/adequacy of types in surrounding landscape as well as within State Forests.</p>
<p>6.4.b. Where existing areas within the landscape, but external to the FMU, are not of adequate protection, size, and configuration to serve as representative</p>	C	<p>MD DNR established RSAs as indicated by gap analysis describe above. For example, Savage River SFMP- Section 5.14.3; PGSF SFMP Section 5.14.3.</p>

<p>samples of existing ecosystems, forest owners or managers, whose properties are conducive to the establishment of such areas, designate ecologically viable RSAs to serve these purposes.</p> <p>Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.</p>		<p>RSAs have been established to protect purpose 2 (RTE and rare communities) and purpose 3 (other habitats and species of management concern) and are most often also described by the FME’s Ecologically Significant Areas (ESAs). See also section 6.1.a. (1) and 6.1.a. (2).</p>
<p>6.4.c. Management activities within RSAs are limited to low impact activities compatible with the protected RSA objectives, except under the following circumstances:</p> <ul style="list-style-type: none"> a) harvesting activities only where they are necessary to restore or create conditions to meet the objectives of the protected RSA, or to mitigate conditions that interfere with achieving the RSA objectives; or b) road-building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the RSA was designated. 	C	<p>RSAs are protected from routine timber management thus serving their intended purpose as a control as confirmed through interviews, observations and management plan review including for example Savage River SFMP- Section 5.14.3. Exceptions are allowed and occur in the following examples:</p> <ul style="list-style-type: none"> a) Non-native invasive plant control has been conducted in RSAs for the purpose of removing interfering plant cover and restoring conditions. b) Exceptions have not occurred for road building.
<p>6.4.d. The RSA assessment (Indicator 6.4.a) shall be periodically reviewed and if necessary updated (at a minimum every 10 years) in order to determine if the need for RSAs has changed; the designation of RSAs (Indicator 6.4.b) is revised accordingly.</p>	C	<p>This indicator will be assessed by MD DNR in 2022 (i.e. 10 years after the completion of the original 2012 RSA assessment).</p>
<p>6.4.e. Managers of large, contiguous public forests establish and maintain a network of representative protected areas sufficient in size to maintain species dependent on interior core habitats.</p>	C	<p>As confirmed through management plan review, this is accomplished through the establishment of management zones that include the following: ESA’s, Wildlands, HCVFs, FIDS habitat, Old Growth Management Complex.</p>
<p>6.5 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.</p>	NE	
<p>6.6. Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health</p>	NE	

and environmental risks.		
6.7. Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.	NE	
6.8. Use of biological control agents shall be documented, minimized, monitored, and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.	NE	
6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.	NA	
6.9.a The use of <i>exotic species</i> 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.	NA	FME reported that no exotic species have been used for commercial or management purposes since the last audit, which the auditor confirmed in field observation. None are used in the Western Region.
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.	NA	See 6.9.a.
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	NA	See 6.9.a.
6.10. Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion: a) Entails a very limited portion of the forest management unit; and b) Does not occur on High Conservation Value Forest areas; and c) Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.	NE	
Principle #7: A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.		
7.1. The management plan and supporting documents shall provide: a. Management objectives. b) description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands. b. Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories. d) Rationale for rate of annual harvest and species selection. e)	NE	

<p>Provisions for monitoring of forest growth and dynamics. f) Environmental safeguards based on environmental assessments. g) Plans for the identification and protection of rare, threatened and endangered species.</p> <p>b) h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.</p> <p>i) Description and justification of harvesting techniques and equipment to be used.</p>		
<p>7.1.a The management plan identifies the ownership and legal status of the FMU and its resources, including rights held by the owner and rights held by others.</p>	NE	
<p>7.1.b The management plan describes the history of land use and past management, current forest types and associated development, size class and/or successional stages, and natural disturbance regimes that affect the FMU (see Indicator 6.1.a).</p>	C	Refer to OBS 2017.1.
<p>7.1.c The management plan describes: a) current conditions of the timber and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions.</p>	C	Refer to OBS 2017.1.
<p>7.1.d The management plan includes a description of the landscape within which the FMU is located and describes how landscape-scale habitat elements described in Criterion 6.3 will be addressed.</p>	C	Refer to OBS 2017.1.
<p>7.1.e The management plan includes a description of the following resources and outlines activities to conserve and/or protect:</p> <ul style="list-style-type: none"> • rare, threatened, or endangered species and natural communities (see Criterion 6.2); • plant species and community diversity and wildlife habitats (see Criterion 6.3); • water resources (see Criterion 6.5); • soil resources (see Criterion 6.3); • Representative Sample Areas (see Criterion 6.4); • High Conservation Value Forests (see Principle 9); • Other special management areas. 	NC	Refer to CAR 2017.2.
<p>7.1.f If invasive species are present, the management plan describes invasive species conditions, applicable management objectives, and how they will be controlled (see Indicator 6.3.j).</p>	NE	
<p>7.1.g The management plan describes insects and diseases, current or anticipated outbreaks on forest</p>	NE	

conditions and management goals, and how insects and diseases will be managed (see Criteria 6.6 and 6.8).		
7.1.h If chemicals are used, the plan describes what is being used, applications, and how the management system conforms with Criterion 6.6.	NE	
7.1.i If biological controls are used, the management plan describes what is being used, applications, and how the management system conforms with Criterion 6.8.	NE	
7.1.j The management plan incorporates the results of the evaluation of social impacts, including: <ul style="list-style-type: none"> • traditional cultural resources and rights of use (see Criterion 2.1); • potential conflicts with customary uses and use rights (see Criteria 2.2, 2.3, 3.2); • management of ceremonial, archeological, and historic sites (see Criteria 3.3 and 4.5); • management of aesthetic values (see Indicator 4.4.a); • public access to and use of the forest, and other recreation issues; • local and regional socioeconomic conditions and economic opportunities, including creation and/or maintenance of quality jobs (see Indicators 4.1.b and 4.4.a), local purchasing opportunities (see Indicator 4.1.e), and participation in local development opportunities (see Indicator 4.1.g). 	NE	
7.1.k The management plan describes the general purpose, condition and maintenance needs of the transportation network (see Indicator 6.5.e).	NE	
7.1.l The management plan describes the silvicultural and other management systems used and how they will sustain, over the long term, forest ecosystems present on the FMU.	NE	
7.1.m The management plan describes how species selection and harvest rate calculations were developed to meet the requirements of Criterion 5.6.	NE	
7.1.n The management plan includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.	NE	
7.1.o The management plan includes maps describing the resource base, the characteristics of general management zones, special management areas, and protected areas at a level of detail to achieve management objectives and protect sensitive sites.	NE	

<p>7.1.p The management plan describes and justifies the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.</p>	<p>NE</p>	
<p>7.1.q Plans for harvesting and other significant site-disturbing management activities required to carry out the management plan are prepared prior to implementation. Plans clearly describe the activity, the relationship to objectives, outcomes, any necessary environmental safeguards, health and safety measures, and include maps of adequate detail.</p>	<p>NE</p>	
<p>7.1.r The management plan describes the stakeholder consultation process.</p>	<p>NE</p>	
<p>7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.</p>	<p>NE</p>	
<p>7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plans.</p>	<p>NE</p>	
<p>7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.</p>	<p>NE</p>	
<p>Principle #8: 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.</p>		
<p>8.1 The frequency and intensity of monitoring should be determined 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>NE</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</p>	<p>C</p>	<p>FME reported the following:</p>

<p>inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.</p>		<ul style="list-style-type: none"> • GRSF — All areas that received a final harvest in the last 2-5 years were inventoried in the last year to monitor and evaluate regeneration. Furthermore, all stands proposed for regeneration harvests were inventoried to evaluate potential for regeneration and guide prescription for regeneration harvest methods. • SRSF — Inventory has been completed within the harvestable areas of the state forest. Regeneration data was gathered for all FY-18 proposals. • PGSF — Forest-wide inventory completed 2 years ago. Regeneration monitoring plans call for 5 yr. (growing seasons) resurvey after harvest completion. 1st harvests since completed since inventoried, are coming due this summer. • CF/PSF — The CFI and forest inventory procedure were completed in 2016. Yield tables were created from the inventory data, and our forest model was updated. Regeneration surveys have been conducted on recent harvest sites.
<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>	C	<p>FME reported no recent timber theft during interviews with forest managers. No new major storm or disease events were reported in 2017.</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>	C	<p>FME reported the following:</p> <ul style="list-style-type: none"> • GRSF — 411,591BF sawtimber, 914 cords pulpwood • SRSF — 941,285 board feet and 1,105 cords of pulpwood • PGSF — By end of FY-17 (June 30), will have 520,937 Bd. Ft. under contract • CF/PSF — 42,293 tons; 646 MBF <p>MD DNR provides an annual Timber Sale Summary. Harvest records for lump-sum, stumpage, and gatewood sales were provided.</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 <i>habitats</i>; 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 	C	<p>2018:</p> <p>FME reported the following:</p> <ul style="list-style-type: none"> • GRSF — Woodcock singing ground survey, wood turtle and herpetology surveys, wild turkey poultry production, bear den reproduction surveys, bear bait surveys, nightjar survey, golden-winged warbler survey, camera trapping surveys for spotted skunk and Frostburg University study of black cohosh. • SRSF — Various research projects have been ongoing throughout the forest focusing on a plethora of plant and animal communities including northern long-eared bats, American chestnut, eastern red-backed salamanders,

<p>9.4).</p>		<p>millipedes, golden-winged warblers, Allegheny wood rats and <i>Monarda didyma</i>. Projects to control the non-native invasive species garlic mustard and Japanese spirea were conducted in the Bear Pen Wildlands. Wildlife and Heritage Division of DNR have ongoing monitoring for black bears, golden eagles, striped skunks and Appalachian cottontails, Pennsylvania Natural Heritage Program at the Western Pennsylvania Conservancy observance of lichens and Frostburg State University study of black cohosh.</p> <ul style="list-style-type: none"> • PGSF — DNR Wildlife and Heritage Program’s surveys for both New England Cottontail and Spotted Skunks, as well as annual Goshawk Nesting monitoring, Frostburg State University investigating various aspects of dragonfly ecology in high elevation wetlands and Frostburg State University study of black cohosh. • CF/PSF — Delmarva Fox Squirrel monitoring by the USFWS, bat monitoring by Salisbury University & plant community monitoring by our Wildlife & Heritage Unit.
<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>Timber Sale Inspection forms are maintained for harvest monitoring visits and finalized at the end of harvest. Parker Forestry Services demonstrated inspection forms for the sites visited in 2017. Parker Forestry Services also demonstrated chemical application maps that show application trails and that protected areas were avoided.</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><i>A Forest Roads Management For Forest Operations on Maryland State Forests</i> has been implemented. This policy creates a systematic inventory of the State Forest roads including ORV trails. This plan documents each road segment and drainage feature in 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>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>FME reported the following:</p> <ul style="list-style-type: none"> • GRSF — NONE • SRSF — Five (5) trail counters have been installed throughout the forest to monitor visitor numbers and the data is downloaded at regular intervals. • PGSF — Western State Forests have engaged in cooperative project with Frostburg State University to carry out a Recreation/Tourism Economic Impact Study, with survey work slated to begin now in April 2017. • CF/PSF — Monitoring of social media sites related to recreational trail use.
<p>8.2.d.4 Stakeholder responses to management activities are monitored and recorded as necessary.</p>	<p>C</p>	<p>At each state forest a complaints log is maintained. This was examined and resolution to each comment is documented when the issue has been investigated and closed.</p>
<p>8.2.d.5 Where sites of cultural significance exist, the</p>	<p>C</p>	<p>There are no such sites on the FMU. However, FME offered</p>

<p>opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3).</p>		<p>this opportunity to Tribes participating in the CAC in the past. In addition, FME is cooperating with the MD Commission of Indian Affairs</p> <p>The most significant change since the last audit is that managers in the Eastern Region have initiated contact with a new recognized tribal representative and are trying to attain tribal participation on the CAC.</p>
<p>8.2.e The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.</p>	C	<p>FME reported that CF/PSF holds quarterly & biweekly meetings with the Contract Manager. All state forests have weekly BMP inspections of harvesting operations.</p> <p>Cost and revenue is monitored as part of the AWP process. AMPs contain a summary of cost and revenue information. Each SF has its own operational budget. Each SF maintains a spreadsheet and reports these to state offices in Annapolis. Accounting reviews all expenditures.</p>
<p>8.3 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."</p>	NE	
<p>8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.</p>	NE	
<p>8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.</p>	NE	
<p>Principle #9: 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> <ul style="list-style-type: none"> 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 b) Forest areas that are in or contain rare, threatened or endangered ecosystems c) Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control) 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>C9.1. Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.</p>	C	
<p>9.1.a. The forest owner or manager identifies and</p>	C	<p>The DNR maintains a HCVF feature class layer in GIS which is</p>

<p>maps the presence of High Conservation Value Forests (HCVF) within the FMU and, to the extent that data are available, adjacent to their FMU, in a manner consistent with the assessment process, definitions, data sources, and other guidance described in Appendix F.</p> <p>Given the relative rarity of old growth forests in the contiguous United States, these areas are normally designated as HCVF, and all old growth must be managed in conformance with Indicator 6.3.a.3 and requirements for legacy trees in Indicator 6.3.f.</p>		<p>available to all foresters as confirmed in the GRSF office. Each SF management plan includes a resource description and maps of HCVFs. When work is to be completed near or in an HCVF the AWP also includes detailed information. HCVF designations include old-growth designations (OGEMA) and nearly old-growth as demonstrated by the GRSF management plan section 5.2.3. Old growth areas are not part of the management zone and are excluded from timber harvest, including salvage, or other physical alterations.</p> <p>The FME provides for not only planning state-wide and SF level but the management system ensures field staff incorporate identification into harvest plans. For example, the GRSF FY 2018 Annual Work Plan (as part of the forest management plan and is an operational process document), page 11 (Treasure Road unit) includes identification of streams within the management area that are considered HCVF. There we six total HCVF identified management areas identified for FY 2018 plans.</p>
<p>9.1.b. In developing the assessment, the forest owner or manager consults with qualified specialists, independent experts, and local community members who may have knowledge of areas that meet the definition of HCVs.</p>	C	<p>As conformed through interviews and document review, this FME consulted with a variety of experts on a number of different occasions during the past 10 years during the completion of this assessment process. Specialists included TNC and MD DNR Heritage program.</p>
<p>9.1.c. A summary of the assessment results and management strategies (see Criterion 9.3) is included in the management plan summary that is made available to the public.</p>	C	<p><i>The Sustainable Forest Management Plan Public Summary</i>, for example, for the PSF and the GMSF were reviewed and include a summary of HCVF assessment results and management strategies.</p>
<p>C9.2. The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.</p>	C	
<p>9.2.a. The forest owner or manager holds consultations with stakeholders and experts to confirm that proposed HCVF locations and their attributes have been accurately identified, and that appropriate options for the maintenance of their HCV attributes have been adopted.</p>	C	<p>Eastern shore: Stakeholder consultation meetings were held in 2006 to determine HCVF boundaries and maintenance options.</p> <p>Western MD: In fall of 2010 staff met with representatives from The Nature Conservancy, New Page and internal experts (Manager/MD DNR Heritage and Wildlife Staff) to formulate initial HCVF designations for the western forests.</p>
<p>9.2.b. On public forests, a transparent and accessible public review of proposed HCV attributes and HCVF areas and management is carried out. Information from stakeholder consultations and other public review is integrated into HCVF descriptions, delineations and management.</p>	C	<p>Each SFMP and AWP include HCVF designations and was part of a multi-stage public review process; each plan contains detailed information on proposed HCV's. See example under 9.1.a, above.</p>
<p>C9.3. The management plan shall include and</p>	C	

<p>implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.</p>		
<p>9.3.a. The management plan and relevant operational plans describe the measures necessary to ensure the maintenance and/or enhancement of all high conservation values present in all identified HCVF areas, including the precautions required to avoid risks or impacts to such values (see Principle 7). These measures are implemented.</p>	C	<p>Each SF management plan includes a resource description and maps of HCVFs. All sites inspected in 2018 had active HCVF layer data shown on maps. When work is to be completed near or in an HCVF the AWP also includes detailed information. For example, several control projects on the PGSF included treatment and follow-up treatments that will keep non-native invasive plants from invading an HCVF to maintain values and avoid risks or impacts to HCVs. The treatments have been implemented for 5-year consecutive years in a 5-7-year program including monitoring of results. In another example on PGSF Compartment 32, Brier Ridge, MD DNR Natural Heritage staff assisted with field delineation of the adjacent HCVF to avoid impacts. AWP maps include detailed maps of the HCVF boundary. And in another example observed during the 2014 audit program, the D14-Indiantown Complex, S5, 6, 7, 9 and 10 on the CSF involves a project for Delmarva Bay Restoration and RTE species based on MD DNR Natural Heritage prescriptions and advice. Prescribed fire was used in 2013 with a fire break and permanent plot stakes observed. MD DNR Natural Heritage flagged the edge of the pool. Machines were not allowed in the Bay Pool; Heritage staff girdled loblolly pines within the pool.</p>
<p>9.3.b. All management activities in HCVFs must maintain or enhance the high conservation values and the extent of the HCVF.</p>	C	<p>Each SFMP describes the management activities within HCVFs. For example, the GRSF plan states “<i>management prescriptions will focus on enhancing and protecting the designated ESA. See Chapter 7 of the plan for detailed explanations on the type of management activity recommended for each zone and for the specific definition and prescription for each ESA category. ESAs have been designated as High Conservation Value Forest (HCVF)...</i>” Management activities observed during this 2014 audit program within or near HCVFs are described above and elsewhere in this report and confirm the requirements of this section as well as conformance to management plan requirements.</p>
<p>9.3.c. If HCVF attributes cross ownership boundaries and where maintenance of the HCV attributes would be improved by coordinated management, then the forest owner or manager attempts to coordinate conservation efforts with adjacent landowners.</p>	C	<p>FME routinely coordinates management across ownership boundaries. An example of the joint management with Wildlife Division personnel was observed at the 2018 site PG-2016-S-04 which was a joint Goshawk management site. Goshawks prefer large canopy trees with an open understory for hunting as part of critical habitat features. Forestry division staff worked collaboratively to remove under- and mid-story woody stems to open flight lanes for Goshawk hunting in this stand.</p>

<p>9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.</p>	<p>C</p>	
<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>	<p>C</p>	<p>FME reported that its Wildlife & Heritage Unit continues to monitor ESAs post restoration treatment on high priority sites. DNR Fisheries do regular Brook trout monitoring in SF streams, Maryland Biological Stream Survey has data collection points on several streams (all in HCVF stream buffers), MD Maryland Department of Agriculture Hemlock Woolly Adelgid protection efforts are monitored by MDA for effectiveness, most of these stands are within HCVF areas, including the 50ft. stream buffers.</p> <p>FME has only reported on activities related to the management of significant concentrations of RTE species, such as the Delmarva Fox Squirrel. While many HCVs rely on passive management approaches, Natural Heritage staff conduct annual reviews of these areas based on a sampling protocol.</p> <p>Publications on Frosted Elfin butterfly habitat were provided as evidence of monitoring of this significant concentration of RTE species population.</p>
<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>	<p>C</p>	<p>FME has not reported any increasing risks to specific HCV attributes under their control.</p>

APPENDICES

APPENDIX C: REGIONAL LIMITS AND OTHER GUIDELINES ON OPENING SIZES, Indicator 6.3.g.1

This Appendix contains regional Indicators and guidance pertinent to maximum opening sizes and other guidelines for determining size openings and retention. These Indicators are requirements based on FSC-US regional delineations

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<p>6.3.g.1.a When even-aged silviculture (e.g., seed tree, regular or irregular shelterwood), or deferment cutting is employed, live trees and native vegetation are retained and opening sizes are created within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime in each community type, unless retention at a lower level is necessary for restoration or rehabilitation purposes. Harvest openings with no retention are limited to 10 acres.</p> <p><i>Guidance: Even-age silviculture is used only where naturally occurring species are maintained or enhanced. Retention within harvest units can include</i></p>	<p>C</p>	<p>Numerous examples were observed during the 2018 audit of live tree and native vegetation retention. MD DNR consistently and routinely used both dispersed and clumped retention of representative dominant and co-dominant species. Examples were confirmed of preferentially leaving high quality snag species and those of other wildlife quality value (such as mast bearing oak species).</p> <p>Neither chemical treatments for site preparation nor planting was observed in Western region during the 2018 audit. Thus, these sites retained native vegetation in the stands examined. Silviculture methods used were consistent with land history characteristics and silvical requirements of native tree species</p>
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<p><i>riparian and streamside buffers and other special zones. In addition, desirable overstory and understory species may be retained outside of buffers or special zones while allowing for regeneration of shade-intolerant and intermediate species consistent with overall management principals. Where stands have been degraded, less retention can be used to improve both merchantable and non-merchantable attributes.</i></p>		<p>occurring and being maintained on sites. No harvest openings greater than 10 acres were observed and all harvest areas with riparian features retained buffers as provided in state BMPs with several examples that exceeded requirements. These areas were generally treated as no cut/no equipment.</p>
<p>6.3.g.1.b When uneven age silvicultural techniques are used (e.g., individual tree selection or group selection), canopy openings are less than 2.5 acres. Applicability note: <i>Uneven age silvicultural techniques are used when they maintain or enhance the overall species richness and biologic diversity, regenerate-shade tolerant or intermediate-tolerant species, and/or provide small canopy openings to regenerate shade-intolerant and intermediate species. Uneven-age techniques are generally used to develop forests with at least three age classes. Uneven age silviculture is employed to prevent high-grading and/or diameter limit cutting.</i></p>	<p>C</p>	<p>For uneven-aged stands there were no gaps observed that were greater than 2.5 acres. Gaps were designed for releasing existing regeneration, promoting regeneration, salvage purposes, or operational efficiencies. See site notes.</p>

Appendix 6 – Chain of Custody Indicators for FMEs

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