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

State of Maryland DNR – Forest Service

State of Maryland, USA

SCS-FM/COC-00069P

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CERTIFIED	EXPIRATION
Day Month Year	Day Month Year

DATE OF FIELD AUDIT
7-11/Apr/2014
DATE OF LAST UPDATE
28/May/2014 Minor CAR closure 019/Sep/2014

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Foreword

SCS Global Services (SCS) is a certification body accredited by the Forest Stewardship Council to conduct forest management and chain of custody evaluations. Under the FSC / SCS certification system, forest management enterprises (FMEs) meeting international standards of forest stewardship can be certified as "well managed," thereby permitting the FME's use of the FSC endorsement and logo in the marketplace subject to regular FSC / SCS oversight.

SCS deploys interdisciplinary teams of natural resource specialists and other experts in forested regions all over the world to conduct evaluations of forest management. SCS evaluation teams collect and analyze written materials, conduct interviews with FME staff and key stakeholders, and complete field and office audits of subject forest management units (FMUs) as part of certification evaluations. Upon completion of the fact-finding phase of all evaluations, SCS teams determine conformance to the FSC Principles and Criteria.

Organization of the Report

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

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SECTION A – PUBLIC SUMMARY

1. General Information

1.1 Certificate Registration Information

1.1.1.a 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	jperdue@dnr.state.md.us
		Website	dnr.state.md.us/forests

1.1.1.b FSC Sales Information

[X] *FSC Sales contact information same as above.*			
FSC salesperson			
Address		**Telephone**	
		Fax	
		e-mail	
		Website	

1.1.2 Scope of Certificate

Certificate Type	[X] Single FMU	[ ] Multiple FMU
	[ ] Group	
SLIMF (*if applicable*)	[ ] Small SLIMF certificate	[ ] Low intensity SLIMF certificate
	[ ] Group SLIMF certificate	
# Group Members (*if applicable*)		
Number of FMU's in scope of certificate	1	
Geographic location of non-SLIMF FMU(s)	*Latitude & Longitude:*	
Forest zone	[ ] Boreal	[X] Temperate
	[ ] Subtropical	[ ] Tropical

Total forest area in scope of certificate which is:	**Units: [ ] ha or [X] ac**
privately managed	
state managed	204,573 (2014)
community managed	

Number of FMUs in scope that are:			
less than 100 ha in area		100 - 1000 ha in area	

1000 - 10 000 ha in area		more than 10 000 ha in area	
Total forest area in scope of certificate which is included in FMUs that:		**Units: ☐ ha or ☐ ac**	
are less than 100 ha in area			
are between 100 ha and 1000 ha in area			
meet the eligibility criteria as *low intensity* 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://www.dnr.state.md.us/forests/.			

1.2 FSC Data Request

1.2.1 Production Forests

Timber Forest Products	**Units: ☐ ha or ☒ ac**
Total area of production forest (i.e. forest from which timber may be harvested)	135,101
Area of production forest classified as 'plantation'	0
Area of production forest regenerated primarily by replanting or by a combination of replanting and coppicing of the planted stems	
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	
Silvicultural system(s)	**Area under type of management**
Even-aged management	
Clearcut (clearcut size range 5.5 – 52 ac)	GR: 218 SR: 22 PG: 33 CF/P: 170
Shelterwood	
Other:	
Uneven-aged management	
Individual tree selection	
Group selection	
Other:	GR: 29 SR: 267 PG: 88 CF/P: 715
☐ Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	
The sustainable rate of harvest (usually Annual Allowable Harvest or AAH where available) of commercial timber (m3 of round wood)	
Non-timber Forest Products (NTFPs)	

Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services	
Other areas managed for NTFPs or services	
Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type	

Explanation of the assumptions and reference to the data source upon which AAH and NTFP harvest rates estimates are based:

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 at this point in time. For example, the Green Ridge SFMP includes a description of the maximum number of acres that may be treated with variable retention harvests.

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.

Species in scope of joint FM/COC certificate: *Scientific/ Latin Name* (Common/ Trade Name)

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; Quercus alba; Quercus rubra; Tilia americana L; Tsuga canadensis (L.) Carr.; Ulmus spp.

1.2.2 FSC Product Classification

Timber products			
	Product Level 1	**Product Level 2**	**Species**
[X]	**W1 Rough Wood**	W1.1 Roundwood (logs)	All
[ ]		W1.2 Fuel Wood	
[ ]		W1.3 Twigs	
[ ]	**W2 Wood charcoal**		
[X]	**W3 Wood in chips or particles**	W3.1 Wood chips	All
[ ]	**Other***	Please List:	

Note: If your operation produces processed wood products such as wood pellets, planks, beams, poles etc. please discuss with SCS staff as you may need a separate CoC certificate.

1.2.3 Conservation Areas

Total area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives	115,659 ac

High Conservation Value Forest/ Areas

High Conservation Values present and respective areas: **Units:** ☐ **ha or** ☒ **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; Ecologically Significant/Wildlands - Western region	15,226 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; old growth and old growth management – Western region	18,484 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; Riparian Buffer Areas – Western region	38,274 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

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

☐ N/A – All forestland owned or managed by the applicant is included in the scope.	
☒ Applicant owns and/or manages other FMUs not under evaluation.	
☐ Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification.	
Explanation for exclusion of FMUs and/or excision:	These other state forests see very little silvicultural activity and are relatively small in acreage. We have no interest in pursuing certification at this time on these lands.

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 the purpose of salvage or demonstration. These properties are not allowed to use the FSC certificate or license codes.

Description of FMUs excluded from or forested area excised from the scope of certification:

Name of FMU or Stand	Location (city, state, country)	Size (☐ ha or xx 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

1.4 Social Information

Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):	
34 male workers	14 female workers

1.5 Pesticide and Other Chemical Use

Maryland DNR Forest Service :: 2013-14	Annual Summary of pesticide and other chemical use			*(over approx last 12 months)*	
Forest	**Commercial name of pesticide/ herbicide**	**Active ingredient**	**Quantity applied annually (kg or lbs)**	**Size of area treated during previous year (ha or ac)**	**Reason for use**
Savage River State Forest	Gly 4	Glyphosate	2 gal (2 % solution)	1 acre	Weed Control
Savage River State Forest	Rodeo	Glyphosate	5.3 gal (38 % solution)	61.2 acre	Fern & competition control
Savage River State Forest	Rodeo	Glyphosate	7.5 gal (2 % solution)	3.75 acre	Knotweed
Savage River State Forest	Garlon 4 Ultra	Triclopyr	3.0 gal. (2 % solution)	5 acre	Weed Control
Green Ridge State Forest	Milestone	aminopyralid	6.4lb	1240 stems	cut treatment of pine on shale barrens
Green Ridge State Forest	Polaris	Imazapyr 27.7%	39lb	6400 stems	cut treatment of hickory on shale barrens
Green Ridge	Garlon 4	Triclopyr	10.oz	400 stems	cut treatment

State Forest				over 4ac	ailanthus
Green Ridge State Forest	Roundup Pro	Glyphosate 53%	60 oz	2 ac	site prep
Potomac Garrett State Forest	Gly -4 Plus	glyphosate	5.3 oz.	0.2 ac	NNIS spot treatments
Potomac Garrett State Forest	Arsenal AC	imazapyr	24.2 oz..a.i.	25.2 ac.	cut surface hardwood control
Potomac Garrett State Forest	Accord	glyphosate	42 lbs.a.i.	28 ac.	Fern and grass control
Potomac Garrett State Forest	Oust	sulfometuron	2.6 lbs.a.i.	28 ac.	Fern and grass control
Potomac Garrett State Forest	Arsenal AC	imazapyr	46 lbs.a.i.	41 ac.	cut surface hardwood control
Chesapeake Forest/Pocomoke State Forest	Aquamaster	Glyphosate	2% solution in water - 5 gallons total	0.5 acres	Garlic mustard foliar spray
Chesapeake Forest/Pocomoke State Forest	Aquamaster	Glyphosate	2% solution in water - 5 gallons total	0.5 acres	Lespedeza foliar spray
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 0.1 gallons total	0.25 acres	Ailanthus altissima (tree-of-heaven) cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 1 oz total	1000 sq ft	Ailanthus altissima (tree-of-heaven) cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 42.75 gallons total	24 acres	Callery pear cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 4 gallons total	10 acres	Cherry, Hickory, Oak cut stump treatment (restoration project)
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 32 oz total	0.25 acres	Eleagnus (Autumn olive) cut stump treatment
Chesapeake Forest/Pocomok	Garlon 3A	Triclopyr	15% solution in water - 2	200 sq ft	Eleagnus (Autumn olive)

e State Forest			oz total		cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 0.5 gallons total	0.25 acres	Japanese Knotweed foliar spray
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	5% solution in water - 4 gallons total	0.75 acres	Japanese Knotweed foliar spray
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 3 oz total	3 trees	Mimosa cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 1 oz total	25 sq ft	Mimosa cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 0.8 gallons total	2.75 acres	Mimosa cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	5% solution in water - 0.5 gallons total	100 sq ft	Mimosa seedling foliar spray
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 1 oz total	15 sq ft	Oriental Bittersweet cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	5% solution in water - 6.5 gallons total	1.25 acres	Oriental Bittersweet foliar spray
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 13 oz total	0.25 acres	Privet cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 1 oz total	100 sq ft	Paulownia tomentosa cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Garlon 3A	Triclopyr	15% solution in water - 6.75 gallons total	10.6 acres	Wisteria cut stump treatment
Chesapeake Forest/Pocomoke State Forest	Razor Pro	Glyphosate	2% solution in water - 4 gallons total	0.25 acres	Bamboo cut stem treatment
Chesapeake Forest/Pocomoke State Forest	Razor Pro	Glyphosate	2% solution in water - 12 gallons total	1 acre	Wisteria foliar spray
Chesapeake Forest/Pocomoke State Forest	Arsenal/Metsulfuron	Imazapyr	12 oz/4 oz - 10 gallons/acre	25 acres	Pine release

1.6 Standards Used

1.6.1 Applicable FSC-Accredited Standards

Title	Version	Date of Finalization
FSC-US Forest Management Standard	V1-0	July 8, 2010
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).		

1.6.2 SCS Interim FSC Standards

Title	Version	Date of Finalization
SCS FSC Chain of Custody Indicators for Forest Management Enterprises	V5-1	December 3, 2012
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).		

1.7 Conversion Table English Units to Metric Units

Length Conversion Factors		
To convert from	**To**	**multiply by**
Mile (US Statute)	Kilometer (km)	1.609347
Foot (ft)	Meter (m)	0.3048
Yard (yd)	Meter (m)	0.9144
Area Conversion Factors		
To convert from	**To**	**multiply by**
Square foot (sq ft)	Square meter (m^2)	0.09290304
Acre (ac)	Hectare (ha)	0.4047
Volume Conversion Factors		
To convert from	**To**	**multiply by**
Cubic foot (cu ft)	Cubic meter (m^3)	0.02831685
Gallon (gal)	Liter (l)	4.546
Quick reference		
1 acre	= 0.404686 ha	
1,000 acres	= 404.686 ha	
1 board foot	= 0.00348 cubic meters	
1,000 board feet	= 3.48 cubic meters	
1 cubic foot	= 0.028317 cubic meters	

2. Description of Forest Management

2.1 Management Context

2.1.1 Regulatory Context

Pertinent Regulations at the National Level	Endangered Species Act Clean Water Act (Section 404 wetland protection) Occupational Safety and Health Act National Historic Preservation Act Archaeological and Historic Preservation Act Americans with Disabilities Act U.S. ratified treaties, including CITES Lacey Act Forest Resources Conservation and Shortage Relief Act National Resource Protection Act National Environmental Protection Act National Wild and Scenic River Act Native American Grave Protection and Repatriation Act Rehabilitation Act Architectural Barriers Act
Pertinent Regulations at the State / Local Level	***Maryland:*** <u>Management Programs and Initiatives</u> ▪ ***Chesapeake Bay Program*** **– An estuary program involving State** and Federal agencies within Maryland, Virginia, Pennsylvania, and District of Columbia working to protect and restore the Chesapeake Bay. ▪ ***Smart Growth*** – The State of Maryland has launched a growth management initiative to reduce suburban sprawl by directing development toward existing urban centers and away from rural areas. ▪ ***Rural Legacy*** – Local governments define targeted rural areas for protection from development through easements and purchase. Lands within local rural legacy areas are eligible for State Rural Legacy funding. ▪ ***Green Infrastructure*** – Department of Natural Resources (DNR) has developed a targeting program to identify ecologically important nodes and corridors to be used in planning efforts at the State and local levels. ▪ ***Clean Water Action Plan*** – In response to the Federal Clean Water Act, DNR developed a targeting and ranking process to identify

watersheds for protection and restoration in Maryland.

- ***Lower Eastern Shore Conservation and Restoration Action Strategy*** – DNR, in conjunction with local interests, developed an action strategy to address water quality concerns in targeted watersheds on the lower Eastern Shore.

Regulatory Programs

- ***Discharge Permits*** – Maryland Department of the Environment (MDE) issues permits placing limits on pollutants from point sources, including wastewater treatment plants and industrial plants.
- ***Nutrient Management Program*** –Maryland Department of Agriculture (MDA) ensures that all farmers follow nutrient management plans for their agricultural operations.
- ***Pesticide Regulation and Applicator Certification Program*** – MDA requires licenses for all businesses engaged in commercial pesticide application or recommendations.
- ***Septic System Regulations*** – MDE and local health departments set standards and requirements for septic system installation on individual properties.
- ***Total Maximum Daily Load (TMDL)*** – MDE sets upper limits for the amount of pollutants that can be discharged from any source to impaired water bodies.
- ***Critical Area Program*** – The Critical Area Commission and local governments regulate development within 1,000 feet of tidal waters of the Bay and limit disturbances to buffers within the first 100 feet.
- ***Stormwater Management*** – MDE and local governments require site plans and installation of stormwater management facilities for development projects.
- ***Forest Conservation Act*** – DNR and local governments require plans for forest conservation and possibly mitigation for development projects that clear greater than 40,000 square feet of forest.
- ***Erosion and Sediment Control*** – Local Conservation Districts require sediment and erosion control plans for activities that may cause land disturbance or erosion.

Incentive Programs

	▪ ***Conservation Reserve Enhancement Program*** – A joint United States Department of Agriculture (USDA)/State program that provides rental payments and cost-share funds to farmers willing to take eligible farmland out of production and to install conservation practices including forested riparian buffers, wetlands, and filter strips. ▪ ***Environmental Quality Incentive Programs*** – A USDA program that provides farmers with incentives and cost-share to implement a variety of conservation practices designed to improved water quality. ▪ ***Maryland Agricultural Cost-Share Program*** – An MDA program that provides farmers cost-share for a variety of conservation practices designed to improve water quality. ▪ ***Biological Nutrient Removal Program*** – MDE offers municipalities 50% cost-share to upgrade wastewater treatment plants with biological nutrient removal. ▪ ***Stormwater Pollution Control Program*** – MDE provides financial assistance to local governments for implementing stormwater management retrofits and conversion projects in existing developed areas. ▪ ***Coastal Non-point Source Program/Non-point Source Management Program/Clean Water Act Section 319 Grants*** – These programs provide financial assistance for implementing projects that reduce non-point source pollution.

Regulatory Context Description

See Pertinent Regulations at the State / local Level, which provides a description of each applicable regulation and how it is applied on State of Maryland DNR – Forest Service land. Several of these laws, regulations, and incentive programs are intended to meet federal requirements that govern endangered species protection, water quality, and cultural resources.

2.1.2 Environmental Context

Environmental safeguards:
BMP checklists are filled out prior to each planned management activity. SFMP and state storm water design manual serve as general guidelines. Certain state forests, such as those in the Western Region, have their own BMP manual adapted to regional conditions. For a summary of effectiveness, see Implementation and Effectiveness for Protection of Water Resources http://www.na.fs.fed.us/watershed/pubs/bmp/09_md_bmp_report.pdf.

Management strategy for the identification and protection of rare, threatened and endangered (RTE) species and their habitats:
Timber harvest operations on sites that include a potential RTE species are not implemented until a field check has been completed by Natural Heritage ecological staff. The MD DNR Natural Heritage Program maintains the database of RT&E species. Field foresters and specialists review special sites and provide field-based information to the MD DNR Natural Heritage Program. Field foresters located in eastern Maryland submit forms to report observations of RT&E species to Maryland Heritage. Each prescription for each management activity is based on an ID team procedure that includes an opportunity for the MD Natural Heritage staff to provide advice. Interviews with MD DNR Natural Heritage staff in association with D14- Indiantown Complex, S5, 6, 7, 9 and 10 and PGSF 34-3 confirm the effectiveness of this process. RTE species are protected through a network of Ecologically Significant Areas (ESAs) located within each of the State Forests. ESAs are described in Chapter 4.3 and Chapter 7.2.1 of each property's management plan. For example the PGSF Sustainable Forest Management Plan names 33 sites and SRSF Sustainable Forest Management Plan describes 22 sites. Sites containing rare plant and/or animal communities have been identified and are managed for their unique attributes. The MD DNR Wildlife & Heritage Service is involved in assuring that special sites are inventoried, marked and managed including database maintenance for each site. For example 2014 interviews with MD DNR Natural Heritage staff in association with D14- Indiantown Complex, S5, 6, 7, 9 and 10 and PGSF 34-3 confirm the effectiveness of this process. The number and extent of ESAs is evidence of a well-established RTE protection program. For example, PGSF has designated 6,442 acres in 34 ESA's and about 37% of the forest area. During recent years, MD DNR completed actions to protect RTE species from ORV impacts and rare plant collectors. The following conservation measures on MD DNR land are based on relevant science, guidelines and consultation with relevant, independent experts: - Damage to rare sand dune community resulted in the closure of the Chandler Tract ORV Trail - Damage to native brook trout in Poplar Lick Stream led to closure of the Poplar Lick trail. - On GRSF, MD DNR Natural Heritage is conducting a rare species study. New conservation zones have not yet been established.

2.1.3 Socioeconomic Context

The lands of Maryland's Lower Eastern Shore encompass Caroline, Dorchester, Somerset, Wicomico, and Worcester Counties. This region is sometimes included in an area referred to as Delmarva, or the Delmarva Peninsula, which includes the State of Delaware and two counties in Virginia, in addition to the Eastern Shore counties of Maryland. Forest products represent a significant source of income within the Eastern Shore region, with loblolly pine (approximately 90 percent of all wood being used in the region) being the most profitable species. Many products are processed locally, and there is a strong desire to keep the State Forests in active forest management to help maintain the forest products sector of the economy. Approximately 205 million board feet of pine sawtimber, hardwood sawtimber, and pine pulpwood is consumed on an annual basis on the Lower Delmarva Peninsula, of which 15-20%

comes from State Forests. Much of this material is utilized by seven pine sawmills and two pine pulpwood chipping operations for paper making. The pine mills produce a variety of products, including piling, utility poles, building poles, dimensional lumber, and decking. Three hardwood sawmills also operate in the region and produce timbers, construction lumber, railroad ties, pallet stock, and some high quality lumber. Other important local industries include agriculture, of which the main enterprise is raising poultry as broilers. Livestock is also raised and feed crops are grown for them locally. Seafood and sport fishing industries are also important and well-known on the East Coast for attracting tourism.

The Western Region includes State Forests in Allegany and Garret Counties. This region is a geographically and socioeconomically a part of Northern Appalachia. The largest private employer of the region is healthcare, followed by the forest products industry. Hardwood veneer, sawtimber, dimensional lumber, cabinetry, furniture, and other secondary wood products are derived from regionally harvested timber. Hardwood pulpwood and specialty items like fence railing, fence posts, mine posts, pallets, railroad cross-ties, and firewood are also important. Common agricultural activities include livestock, grain, hay, and vegetable production. Gas and coal industries are also important economic activities in the region. Tourism, recreation, and hunting on State Forests also attract a number of visitors annually that use local eateries and hotels, among other service industries. A more detailed analysis of the multiplier effects of hunting and recreation is included in the Sustainable Forest Management Plans for the Western Region, which are available publicly.

There are no indigenous tribes with rights to use or manage any state forestlands in Maryland. Any cultural sites that are encountered are protected according to the state's management guidelines.

2.1.4 Land use, Ownership, and Land Tenure

The subject lands are owned by the State of Maryland and there are no known cases where this ownership is being legally challenged. In a few areas, the lands are encumbered by easements for transmission lines, pipelines, public roads, and minor rights-of-way.

When the Chesapeake Forest project lands were purchased and transferred to the State, a variety of private clubs had leases allowing use of the properties for hunting. The hunt club lease program continues on these lands, with a portion of the leases held by the traditional clubs and the remainder being made available to the public through a lottery system. As public lands, the subject properties are used for a wide variety of public uses, including hiking, riding horses, canoeing, and picnicking. The Pocomoke State Forest also contains an off-road vehicle (ORV) trail that was mandated by State legislation.

In the Western Region, there are no hunt leases since the lands had no legacy lease agreements. All hunting and recreation is open to the public as long as state laws are adhered to. ORV use on several trails was suspended last year; however, new public trails are currently being developed in collaboration with a number of stakeholders.

In the entire Lower Eastern Shore area, current land uses are: urban (5%), agriculture (25%), forest (30%), water (30%), and wetlands (10%). Forests in the Eastern region are highly fragmented and the natural fire cycle has been disrupted by fire suppression. Almost 70 percent of the state forest of this region is now found in pine plantations or semi-natural managed pine stands. The remaining lands are a mix of pine/hardwood, mixed hardwoods, riparian areas, and wetlands.

In the Western Region, current land use is described in each Sustainable Forest Management Plan in Table 2.1. By far, forest cover is the dominant land use in both Garrett (≈68% of surface area) and Allegany (≈77% of surface area) Counties followed by agriculture and urban/developed land uses, respectively. Forests of the region are overwhelmingly naturally established hardwoods with a few natural conifer components. While forests are more contiguous in the Western Region, pressure to develop private lands to non-forest land uses such as housing is steady.

2.2 Forest Management Plan

Management Objectives:

Objectives are described throughout each State Forest's Sustainable Forest Management Plan (SFMP) and Annual Work Plans (AWP). All plans are available here: http://www.dnr.state.md.us/forests/mdforests.asp.

Sample objectives from SFMPs from the Eastern Region:
From Chapter 5, Chesapeake SFMP:

- *The main objective for Forest Management on the Chesapeake Forest is to maintain a sustainable and economically self-sufficient forest. This is to be achieved by including objectives that provide for clean water, soil stabilization, support for populations of native plants and animals, protect areas with critical functions or habitats, sustain compatible economic uses and provide for scenic, recreational and educational values. Accomplishing these objectives will be done through implementation of the Annual Work Plan.*
- *A primary objective of Chesapeake Forest Lands is to become a national model of certified sustainable forestry. To meet that objective Chesapeake Forest Lands combined third-party certification under both the Sustainable Forestry Initiative (SFI) standard and the Forest Stewardship Council (FSC) standard. In the spring of 2005 dual certification under these two standards was achieved for the entire Chesapeake Forest, compliance with certification is monitored through annual audits. See Appendix: C & D for details on the two certification programs.*

Sample objectives from SFMPs from the Western Region:
From Chapter 5, Potomac-Garrett SFMP:

As stated in Chapter 1, the primary goal on the Potomac-Garrett State Forest is: to demonstrate that an environmentally sound, sustainably managed forest can contribute to local and regional economies while at the same time protecting significant or unique natural communities and elements of biological diversity.

This is to be achieved by objectives that include, but are not limited to, providing for clean water, maintaining soil stabilization, supporting populations of native plants and animals, protecting areas with critical functions or habitats, sustaining compatible economic uses, and providing for scenic, recreational and educational values. Accomplishing these objectives will be done through

implementation of an Annual Work Plan. Copies of Annual Work Plans for Potomac-Garrett State Forest can be found on the DNR website at: ttp://www.dnr.state.md.us/forests/workplans/).

From Chapter 6, section 6.2, Riparian Forest Buffers: High Conservation Value Forest, Potomac-Garrett SFMP:

In order to achieve these goals, the following management objectives will be used as criteria to more specifically evaluate and design potential management activities:
1) Minimize disturbance to soil structure or duff layer;
2) Avoid exposed mineral soils;
3) Prevent all rills, gullies, or ruts that may channel water flow and short circuit surface flow paths;
4) Protect mixed hardwood or mixed hardwood/conifer forest community;
5) Maintain mature forest conditions adjacent to stream; and,
6) Encourage the development of a diverse uneven-age forest community in terms of species, canopy levels, and diameter class.

Forest Composition and Rationale for Species Selection:

Eastern Region (see chapter 5 of SFMPs):

- **Forested swamps with mixed hardwood, bald cypress and Atlantic white cedar**. Only restoration activities, such as planting of Atlantic white cedar, occur on these areas.
- **Mixed pine-hardwood, hardwood-pine and mixed hardwood forests**. These forest types will be managed toward mature stands of mixed hardwoods and pine. This will be done with commercial thinning, selection harvesting and small-opening harvests designed to encourage regeneration of desired native species, such as oaks, loblolly pine and short-leaf pine.
- **Loblolly Pine Forest.** This forest type is made up of loblolly pine plantations and naturally regenerated loblolly pine forest. Other tree species mixed in this forest type are a variety of gums, maples, oaks, Virginia pine and some Short leaf pine. Plantations are managed on a semi-natural management trajectory with retention of pines and hard-mast-producing hardwoods, as well as clumped retention where tolerant hardwoods may persist. Naturally occurring loblolly pine and mixed pine stands will be managed to maintain the naturally occurring species mix.

Western Region (seep chapter 5 of SFMPs):

- **Mixed Oak.** These forests will be managed toward mature stands of mixed oak hardwood. This will be done with commercial thinning, selection harvesting, shelter wood harvesting and small-opening harvests designed to encourage regeneration of desired species such as oak.
- **Plantations (Conifers).** This forest type is made up principally of Red and White pine plantations with a few acres of Norway Spruce. A variety of hardwood tree species are mixed in this forest type. These stands are managed on a semi-natural trajectory in which native conifers and hardwoods will replace plantations.
- **Northern Hardwoods.** This forest type will be managed to achieve large mature trees. The tree species in this type, such as sugar maple and American beech are suitable for uneven-aged management systems.
- **Red Maple.** This forest type is one of the most likely to increase in the wake of catastrophic losses due to host specific insect or disease. The noted increase can be attributed in part to the significant losses of oaks during the numerous Gypsy Moth infestations over the past two decades. Growing conditions on much of PGSF produce a high quality and thus economically valuable Red Maple timber, though the wildlife habitat values do not match those of the mixed oak types. In general, forest management practices will favor mast producing oaks over conversion to red maple type.

- **Hemlock.** This forest type is predominately eastern hemlock and frequently mixed with varying amounts of hardwoods. This timber type is typically found along river/stream borders with northern aspects. The management goal for this timber type is maintain mature stands for stream protection, water quality, and thermal protection for many wildlife species.
- **Cove Hardwood.** This forest type will be managed to achieve large mature trees. Most of the species that make up this type are relatively fast growing, early successional trees. Silvicultural treatments in this type will be even-aged management systems.
- **Hardwood/White Pine.** These forest types will be managed toward mature stands of mixed hardwood and pine species. This will be done with commercial thinning, selection harvesting, shelterwood harvesting and small-opening harvests designed to encourage regeneration of desired species.

General Description of Land Management System(s):

Eastern Region: Forests are managed primarily under even-aged systems with retention of clumps and dispersed individuals. Selection systems may be used in hardwood stands.

Western Region: Forests are managed primarily under even-aged systems with retention of clumps and dispersed individuals. Shelterwood harvest systems are also used to regenerate hardmast species such as oak. Where larger openings for wildlife or to reduce the density of tolerant to midtolerant soft mast species is an objective, variable retention harvests under an even-aged trajectory may be used. Selection systems are typically employed in forest types consisting of tolerant species.

Harvest Methods and Equipment used:

Ground-based harvesting equipment is used in both regions. Mechanized felling is preferred, though hand-felling with chainsaws is sometimes used on difficult terrain. Typical machinery includes skidders, feller-bunchers, forwarders (with or without processing heads), log loaders, etc.

Explanation of the management structures:

See Appendix A of all SFMPs for an explanation of how each state forest is managed by a team of DNR staff that report to the Annapolis office with input from a Citizen Advisory Committee and the public.

2.3 Monitoring System

Growth and Yield of all forest products harvested:

MD DNR maintains an inventory system that covers growth and yield. 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 at this point in time. For example, the Green Ridge SFMP includes a description of the maximum number of acres that may be treated with variable retention harvests.

Appendix H includes a description of the assumptions behind the growth and yield modeling. Summaries of projected growth and allowable harvests based on growth rates, mortality, disease, etc. are included in Appendix H. Volume can be estimated from area control through use of site index ranges. The inventory system for the Eastern Region is about to be updated. The Western Region is four years into a five year project to update its inventory data.

Forest dynamics and changes in composition of flora and fauna:

1) RTE data and monitoring is accomplished through the Interdisciplinary team process and an established relationship with the MD Natural Heritage Program as confirmed through interviews with Natural Heritage Program staff.
2) Common and rare plant communities and habitats are monitored through the use of SILVAH OAK

inventory system. In addition, the Wildlife and Heritage Service, and Fresh Water Fisheries gather information on plant and animal populations.
3) The recently developed Early Detection and Rapid Response Plan, associated monitoring protocol and 2 associated recent research projects are led by DNR's Heritage program to monitor invasive species. SILVAH OAK inventory system also includes documentation of the presence of invasive plants. In addition, it is clear from site observations and staff interviews that the DNR staff is well-trained and knowledgeable about this issue.
4) Zones including protected HCVF, buffer zones, Wildlands, RSAs and Old Growth are monitored through stand level inventory (SILVAH OAK protocol).
5) See item 4 above.

Environmental Impacts:

In the eastern region, Parker Forestry completes inspection forms on Chesapeake Forest Project and MD DNR foresters also inspect tracts and fill out reports. Pocomoke State Forest inspections are completed solely by DNR forestry staff. In the western region, MD DNR field foresters conduct post-harvest monitoring and complete Timber Sale Inspection Reports that were presented and reviewed for each of the sites visited during this audit program. This FME also instituted an internal silvicultural audit system to examine the environmental and management impacts of silvicultural activities. This monitoring system was recently been expanded to include a post-harvest review by the ID team.

Logging contractors reported that MD DNR staff conduct site visits at least once per week during active harvests. Timber Sale Inspection forms are maintained for these visits. This form is used for the final inspections.

A Forest Roads Management For Forest Operations on Maryland State Forests 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.

A bill was passed in the 2013 session of the Maryland Legislature that ensures dual forest certification of the Maryland State Forests. The Forest Service has also worked to secure DNR critical maintenance funds for State Forest roads maintenance projects. The road inventory portion of this process has been completed as confirmed through interviews and review of the prioritization list of road inventory improvement projects. MD DNR also instituted an internal monitoring system to examine the environmental and management impacts of silvicultural activities. This monitoring system was recently been expanded to include a post-harvest review by the ID team as described elsewhere in this report.

Social Impacts:

MD DNR maintains a complaint log in SF offices. Records were examined for Savage River SF.

Each forest manager responds to inquiries and complaints with direct communications. When these cannot be resolved locally the issue is occasionally referred to the Annapolis office. The main mechanism for soliciting comments is response to each posted State Forest Management Plans and Annual Work Plan that details the proposed activities for the upcoming year.

See also **Minor CAR 2014.13.**

Costs, Productivity, and Efficiency:

Cost and revenue is monitored as part of the Annual Work Plan process. The current Annual Work Plan

contains a summary of cost and revenue information. Each SF has its own operational budget. Each SF maintains a spreadsheet and reports these to state offices in Annapolis. Accounting reviews all expenditures.

3. Certification Evaluation Process

3.1 Evaluation Schedule and Team

3.1.1 Evaluation Itinerary and Activities

Date: April 7, 2014 Chesapeake & Pokomoke State Forests	
FMU / Location / sites visited	**Activities / notes**
Chesapeake Forest HQ (Auditors: Meister, Boatwright, Kittredge together all day)	Opening Meeting: Introductions, FSC updates, review of open CARs, final field site selections, interviews.
P02 Nazareth Church - Tract 6, S6, S8	Pond pine restoration harvest completed during 2013 and not yet burned. Seed tree harvest for DFS habitat enhancement; loblolly, pitch and pond pine and large mast producing oaks retained in islands and dispersed throughout stand. LWD and snags observed. Some damage to residuals along skid road that was discussed with operators. Some slash and tops remain that could be an issue for future fire prescription. A dozen pieces of firewood remain on landing.
P02 Nazareth Church - Tract 4, S5; Tract 5, S1,S15	Pre-commercial thinning of loblolly pine completed manually under contract. Herbicides not used. Will encourage oak and other hardwoods.
P02 Nazareth Church - Tract 4, S19	37-acre FY2014 proposed final harvest of loblolly pine with retention of oak and pine to enhance DFS habitat. This stand regenerated naturally ~1917. ID team, CAC and public review complete with no comments received. Retention not yet marked. Gate and signage ('No motorized vehicles') observed. Discussion of availability of other 70-year old stands in other zones, most of which are protected from management activities.
P02 Nazareth Church - Tract 6, S6, S8	Pond pine restoration - South end of treatments observed earlier in the day. Pond pine restoration harvest completed during 2013; fire prescription complete. Seed tree harvest within general management zone for DFS habitat enhancement; loblolly, pitch and pond pine and large mast producing oaks retained in islands and dispersed throughout stand. LWD and snags observed. Some damage to residuals along skid road that was discussed with operators. Some slash and tops remain that could be an issue for future fire prescription.
P07 Chandler Tract 23, S1	FY2014 1st thinning in loblolly pine retaining 80-90 ft 2 BA and mast trees for habitat. 6-acre section of potential future DFS habitat and nearly adjacent to future OG. Access road recently repaired; previously an ORV trail. Observed that ORVs are occasionally accessing this area although the road is gated and

	signed and patrolled by Natural Resource Police (interviewed) and State Forest staff.
P07 P06 Hudson Tarr-Mountain Bike Trail	4.5-mile bike trail addition to an existing trail; previously existed as an old road. Construction completed with funding from grants and including signage, markers and gate. A timber sale preceded the trail construction and is visible from the trail; however, slash within the trail buffer has been cleared. More recent grant will be used for trail maps. Discussion of the development of digital downloadable maps and a new DNR app for trails.
WR40-Dunn Swamp Complex S 25, 26	1st thinning in loblolly pine (every 5th row removed) and retained oak for mast. Discussion of utilization and rutting guidelines; some poles left behind from an incomplete load.
Date: April 8, 2014: 8am-5pm. (2 teams; teams re-join at last stop) Chesapeake & Pocomoke SF	
FMU / Location / sites visited	**Activities / notes**
Chesapeake & Pocomoke SF (Auditor team 1: Kittredge and MD DNR staff)	
W08 Bacon Complex, S10 (Kittredge)	1st thinning in loblolly pine and DFS-friendly habitat; residual damage checked and not observed. Boundary paint and signs observed. Poled ford used to cross old-field ditch. Stand too young for LWD or snags. Gate used to control access.
Walker Cemetery; Spontaneous, unplanned stop	Protection of special sites (Old homestead and fenced Walker Cemetery) observed. Fencing replaced about 5 years ago. Map of cemeteries presented and reviewed.
Tom Tyler Trail (Kittredge)	700-acre tract with trail head sign, interpretive signs, picnic tables, kiosk with photos and information about FSC conservation, BMPs and MD DNR goals, improved parking area; tract includes an Atlantic White Cedar Swamp. Prescribed fire was used following loblolly removal a while ago to enhance ESA zone 1 for RTE. Observed eagle. This area is posted for no hunting. Fences used to block ORV access. Observed that ORVs are occasionally accessing this area although the road is gated and signed and patrolled by Natural Resource Police (interviewed) and State Forest staff. 8 years ago staff resolved a similar issue on this property and are pursuing this one as well.
D14. Indiantown Complex, S27, 28, 29 (Kittredge)	1st thinning in loblolly pine for Delmarva Bay Restoration based on MD DNR Natural Heritage prescriptions and advice. Landing blocked to restrict access. This stand was bulldozed by previous ownership; legacy trees are largely not present due to past practices although mature cherry, red oak, red maple and snags were observed in windrows and legacy pines were observed along roads and boundaries. Residual damaged checked; none found. Excellent examples of communication and cooperation between agency staff from different divisions.
D14. Indiantown Complex, S5,6,7,9,10 (Kittredge)	Restoration project in loblolly pine for Delmarva Bay Restoration and other RTE species based on MD DNR Natural Heritage prescriptions and advice. Prescribed fire used in 2013. Fire break

	and permanent plot stakes observed. MD DNR Natural Heritage flagged the edge of the pool. Machines were not allowed in the Bay pool where Heritage staff girdled loblolly pines. Nearly adjacent pool identified in air photo by Heritage; polygon and points loaded to GPS for forestry staff who flagged the boundary of the pool as part of the continuation of this restoration project. Excellent examples of communication and cooperation between agency staff from different divisions.
D21. Lecompte Complex, S3, 4 (Kittredge)	85-acre 1st thinning in loblolly pine with mast trees retained for DFS habitat enhancement. Completed fall 2013 with harvest operation halted for wet periods. Landing free of debris. Large snag observed. Hunting lease area with deer stand with handicap ramp. Boundary paint and signs observed. Gate used to restrict access.
D04. Lindner Complex, S8,9,11,12 (Kittredge)	1st thinning in loblolly pine in DFS habitat. Completed June 2013. Observed oak retention for mast (20"), large loblolly (15"), cavity trees and snags. This stand was bulldozed by previous ownership; legacy trees are largely not present due to past practices although mature cherry, red oak, red maple and snags were observed in windrows and legacy pines were observed along roads and boundaries. Gate used to restrict access. Hunting lease area. Boundary paint and signs observed at back of harvest.
Parker Forestry Office: (Audit team 2: Boatwright and Meister and MD DNR staff)	Document review and interviews with Parker Forestry and MD DNR staff (Timber sale and chemical use contracts, inventory/ sustained yield calculations, harvest prescriptions, chemical applications, Delmarva Fox Squirrel habitat map)
W35 – Messick Complex – Stand 8 (pre-commercial thinning)	Pre-commercial thinning adjacent to final harvest unit; completed manually according to contract. Slight ice damage to stand. Interview with tree planting crew in regeneration harvest unit to discuss health and safety issues. Workers were knowledgeable of PPE and emergency procedures.
W17 – RF Richardson Complex – Stand 1 (final harvest)	Clearcut with retention of clumps of conifer and hardwood; individual hardwoods scattered throughout stand. Will herbicide to control tolerant hardwoods; clumps will not be treated, which will allow tolerant hardwoods to remain on-site and mature. Property boundaries clearly marked.
W17 – RF Richardson Complex – Stand 8 (pre-commercial thinning)	Pre-commercial thinning completed manually according to contract. Examination of stream management zones (300' buffer); no harvest zone other than adjacent power line right-of-way.
W17 – RF Richardson Complex – Stand 1 (final harvest)	Overstory removal of 99% of all pine, poplar, and gum with nearly 100% retention of established mid- to over-story oaks. Spray will occur after mapping location of oaks.
D03. Little Blackwater (Auditors: Meister, Boatwright, Kittredge)	Non-native invasive plant control of Callery pear (*Pyrus calleryana*) on wetland meadow and pond restoration site with some areas under lease for agriculture (≈780 acres). Pre-restoration water quality data is available. Successful 2013 invasive species removal efforts were completed within this open field and field edge, and

	included Callery Pear and Canada thistle. Callery pear has re-appeared along the road and will be treated again in 2014. Email correspondence between MD DNR staff and volunteers from the Chesapeake and Coastal Service, Section Chief for Community-Based Restoration Program was presented and reviewed and confirms that this next phase is on track.
Date: April 9, 2014: 8am-6pm Green Ridge SF	
FMU / Location / sites visited	**Activities / notes**
Flintstone Fire Hall (Auditors: Meister, Boatwright, Kittredge).	Opening Meeting: Introductions, FSC updates, introduction to 3 western MD DNR State Forests, Shale Barren restoration presentation (MD DNR Natural Heritage), final field site selections, interviews.
GR-01-13 Oldtown Road Salvage	2014 38-acre complete salvage of 106-year old mixed oak stand. Overstory mortality approaches 100% resulting from Memorial Day 2011 hail storm. Snags and cavity trees and islands of live retention retained (pitch pine and oak species) as well as in stream buffers and ravine between harvest blocks. Retention in road-side buffer lower than usual due to mortality. Regeneration was damaged by hail as well as overstory. Silvah OAK will be used to check regeneration following salvage. Some of the smaller trees were producing epicormic sprouts and may stump sprout following harvest. Salvage plans were not expedited; the review process included all review steps. DNR staff completed research of Hercules club present in the understory and determined that it is not a NNIS. Adjacent private inholding owner contacted with no complaints about this treatment. State boundary line and markers observed. Interviews with logging contractors for health and safety requirements.
GR-02-13 Oldtown Road Salvage	2014 25-acre active salvage of mixed oak stand. Overstory mortality approaches 100% resulting from Memorial Day 2011 hail storm. Snags and cavity trees and islands of live retention retained (pine and oak) some of which are located in damp ravine areas as well as a roadside buffer. More live Virginia pine found here than in the previous site and yellow poplar and white pine are found on this site but not the previous site. Upslope edge adjacent to untreated OGEMA area; OG area also affected by the storm damage. Regeneration was damaged by hail as well as overstory. Silvah OAK will be used to check regeneration following salvage. Some of the smaller trees were producing epicormic sprouts and may stump sprout following harvest. Salvage plans were not expedited; the review process included all review steps. It is common for the GRSF staff to specify by contract the retention of WO, shadbush, pine, snags, cavities, RO, flowering dogwood and hickory as scattered individuals. Live white oak observed in the un-cut area are designated to be harvested as part of this treatment

	although these live stems could be an important element of the dispersed retention if retained. Interview with natural heritage staff and forest technician.
North Craft Cemetery Spontaneous, unplanned observation	New sign installed by MD DNR staff on road marks this small special site/cemetery location. Green Ridge map of cemeteries presented and reviewed.
Malcolm Rd/Anthony's Ridge	TSI and Golden wing warbler habitat improvement project. ~900 acre area and 1 of 3 Special Habitat Areas. Treatments for special species designed to enhance habitat (e.g. Golden Winged Warbler) based on BMPs for these species and including for example 10-acre regeneration harvests with residual stems and a 38-acre thinning in a 40-year old stand. This is a focal area for GWW in MD. Plan completed during 2013 with cooperation from multiple partners. Practices implemented and on schedule. Interview with forest technicians and managers.
St. Johns Rock ORV Trail	Driving tour of a proposed trail location for future ORV trail. Seasonal hunting restrictions only. Some engineering still in progress. Some review completed (stakeholder, CAC, public). Some of this proposed trail coincides with a pre-existing (now gated) Red Dog Road. Baseline independent monitoring and ongoing monitoring are being planned. Some road sections are newly located to avoid RTE habitat and to avoid a stream crossing. Posted speed limit (10 mph) and signage ('authorized vehicles only') at power line. Renegade side trails have been closed/ blocked off. Trail opening date TBD.
Jacobs Road	34-acre pre-commercial thin completed by summer crew during 2013. Crop trees flagged on spacing. Hack & squirt used on 2/3 of stems and chainsaw used on 1/3 of stems.
Date: April 10, 2014: 8am-5pm then 7:30-9:30 pm deliberations (3 teams with individual assignments: Savage River SF field tour or Potomac Garrett SF field tour or New Germany SP Lake House for document review and interviews.	
FMU / Location / sites visited	**Activities / notes**
Potomac Garrett State Forest HQ: (Kittredge and MD DNR staff)	Introductions, GIS demonstration, Forest Inventory review, NNIS control description, road inventory discussion, staff training record review.
PGSF 17-D (Kittredge)	2013 20-acre completed hack & squirt plus use of loppers by summer crew to complete understory removal of small (<4 " dbh) less desirable species (RM, witch hazel, striped maple). Oak regeneration lacking in this area.
PGSF 17-G (Kittredge)	2013 completed 9-acre clearcut with variable retention in islands and with retention of streamside buffer. Excellent oak regeneration present. High deer browse. Area fenced to exclude deer; fencing installed under timber harvest contract as suggested by biologist. Observed large snags, LWD and large den. Next stage already marked (for retention).

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

	Planting efforts were completed during 2002 and 2004 following a 2002 overstory thinning of this stand. Mature red spruce were retained in the overstory of this stand and observed during this field stop. Another strategy that was described but not observed during the 2014 audit program involved a mixed hardwood stand that includes an unusual understory component of red spruce (20-30 stems/acre); a non-commercial release was completed in an attempt to favor this unusual understory.
SRSF Russell Road Salvage (Boatwright)	160-acre salvage resulting from the 2006/2007 Gypsy moth damage and followed by ice damage. Minimal live oak or future seed sources. Salvage operation to be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration. Prescribed fire logistics have not yet been completed but will begin upslope of the salvage in the nearly adjacent shale outcrops (RSA) and travel through most of this salvage area to a skid road lower on the slope and stopping before an old growth stand (HCVF). Prescribed fire minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community. Excellent example of research and cooperation with Heritage, TNC and others for assistance with a future prescribed fire prescription of this size. Salvage completed June 2013 and included good SMZs around wet seeps and retention surrounding shale outcrops within the sale area. Haul roads were retired using well constructed water bars. Timber Sale Inspection Reports were detailed.
SRSF Fairview Road Aspen Regeneration (Boatwright)	3 small areas (totaling 6.5 acres) dominated by red maple, big toothed aspen and black cherry. Goal of harvest was to improve habitat for ruffed grouse and goshawk which have known nesting sites in the area. Regeneration cut was completed in July 2013 and included harvesting all merchantable trees and felling all pre-merchantable stems.
SRSF Fairview Road Salvage (Boatwright)	48-acre salvage resulting from the 2006/2007 Gypsy moth damage and followed by ice damage. Minimal live oak or future seed sources. Harvest included a bridged haul road crossing of an ephemeral stream and was completed in September 2013. Haul road was retired with well - placed water bares hay and grass seed. Timber Sale Inspection Reports were detailed.
SRSF East Shale Road forest road improvement projects (Boatwright)	Maintenance of a heavily used road/trail performed by SF employees and funded by a $30,000 grant. Work included the replacement of several culverts and graveling sections of the road. The grant funds were exhausted before the graveling portion of the work was completed. Several side trails blocked/closed with large boulders.
SRSF Posey Row Road regeneration harvest (Boatwright)	8-acre gypsy moth salvage within 15-acre stand that is landlocked. Timber was sold to the adjoining landowner who also runs a small sawmill. Sale has been extended once.

SRSF Margroff Place regeneration harvest (Boatwright)	16-acre gypsy moth salvage completed December 2013. Harvested involved removing all merchantable timber (poor quality cherry, oak and red maple). Tract is very steep and harvesting was accomplished by a track cutter. Retention was positioned along the north and south sale boundaries. 2 long skid trails were water bared. Log deck and bare spots were seeded and strawed.
SRSF Margroff Place thinning/sanitation (Boatwright)	This sale was not cut as budgeted. Original plan called for a normal Norway Spruce thin. 2 bug spots were discovered during a site inspection. The bug spots and a buffer were harvested and the remaining stand thinned. Log deck had grass and straw.
Whiskey Hollow Thinning/Salvage Unscheduled stop (Boatwright)	Active logging job in a 36-northern hardwood/mixed oak stand. 6% of the stand is dead. Sale is marked by SF employees. Reviewed Pre-Harvest plan and Timber Sale Inspections. Interviewed logger, Butch Glotfelty, who is a Master Logger and observed his spill kit.
New Germany State Park Lake House: (Meister and MD DNR management staff)	State-wide and central office document review and staff interviews (Meister and MD DNR management staff).
Grantsville MD Hotel	Auditor deliberation and preparation for the closing meeting.
Date: April 11, 2014	
FMU / Location / sites visited	**Activities / notes**
8-11 am	Auditor deliberation and preparation for the closing meeting.
11 am – Noon. New Germany SP Lake House	Closing Meeting: Discussion of preliminary findings, next steps, questions.

3.1.2 Total Time Spent on Evaluation

A. Number of days spent on-site assessing the applicant:	5
B. Number of auditors participating in on-site evaluation:	3
C. Additional days spent on preparation, stakeholder consultation, and post-site follow-up:	3
D. Total number of person days used in evaluation:	**18**

3.1.3 Evaluation Team

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

	conducts Lead Auditor Chain of Custody audits under the SFI, FSC and PEFC Standards, is qualified as a Lead Auditor (ISO 19011) and has authored >500 reports for a broad range of landowners, manufacturers, distributors and brokers. Anne Marie has > 20 years of experience in traditional forest management, wildlife habitat management, marketing and utilization and forest cutting practices regulations. Anne Marie's experience as a state forester in Massachusetts focused on management of FSC certified state-owned forest lands, forest cutting practice regulation enforcement as well as private landowner assistance and current use certification administration. Anne Marie earned both MS and BS in Forestry from the University of Massachusetts in Amherst.		
Auditor Name:	Norman Boatwright	**Auditor role**:	Lead SFI auditor
Qualifications:	Norman Boatwright is the president of Boatwright Consulting Services, LLC located in Florence, South Carolina. BCS handles typical forestry consulting, SFI, ATF and FSC Audits, Phase I Environmental Site Assessments, Forest Soil Mapping, Wetland Delineation, and other Biological Services. Norman has over twenty-nine years' experience in intensive forest management, eighteen years' experience in environmental services and ten years' experience in forest certification auditing. He has conducted Phase I Assessments on over three hundred and fifty projects covering 3,000,000 acres, Endangered Species Assessments on timberland across the South, and managed soil mapping projects on over 1.3 million acres. From 1985-1991, he was Division Manager at Canal Forest Resources, Inc. and was responsible for all forest management activities on about 90,000 acres of timberland in eastern South Carolina. Duties included budgeting and implementing land and timber sales, site preparation, planting, best management practices, road construction, etc. From 1991-1999, he was manager of Canal Environmental Services which offered the following services: Phase I Environmental Site Assessments, Wetland Delineation and Permitting and Endangered Species Surveys. From 1999-2012 he was the Environmental Services Manager Milliken Forestry Company. Norman has extensive experience auditing SFI, procurement and land management organizations and American Tree Farm Group Certification Programs. He is also a Lead Auditor for Chain of Custody Audits under SFI, PEFC, and FSC.		

3.2 Evaluation of Management System

3.2.1 Methodology and Strategies Employed

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.

3.2.2 Pre-evaluation

☒ A pre-evaluation of the FME *was not* required by FSC norms.

☐ A pre-evaluation of the FME was conducted as required by and in accordance with FSC norms.

3.3 Stakeholder Consultation Process

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

3.3.1 Stakeholder Groups Consulted During Evaluation for Certification

FME Management and staff	Pertinent Tribal members and/or representatives
Consulting foresters	Members of the FSC National Initiative
Contractors	Members of the regional FSC working group
Lease holders	FSC International
Adjacent property owners	Local and regionally-based environmental organizations and conservationists
Local and regionally-based social interest and civic organizations	Forest industry groups and organizations
Purchasers of logs harvested on FME forestlands	Local, state, and federal regulatory agency personnel
Recreational user groups	Other relevant groups

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. A public notice was sent to stakeholders at least 6 weeks prior to the audit notifying them of the audit and soliciting comments. 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.

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

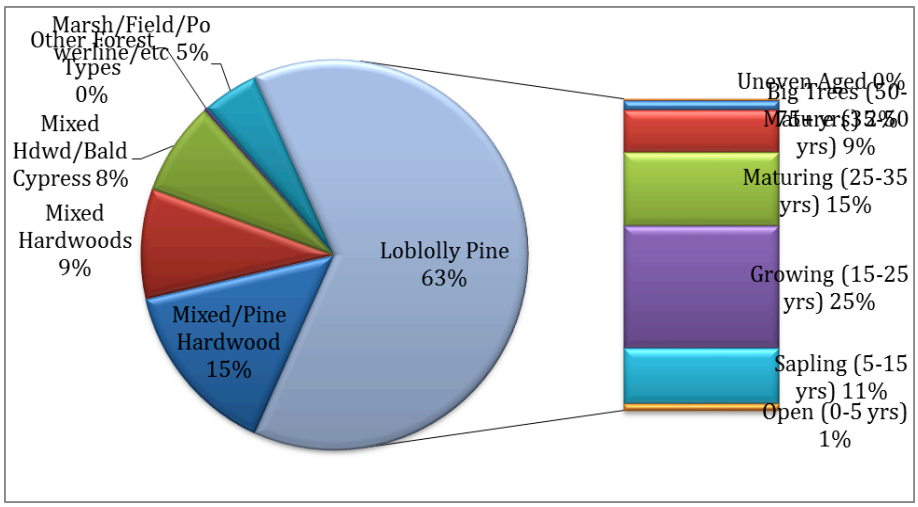
Stakeholder Comments	SCS Response
Economic Concerns	
MD DNR gets funded by timber harvests- this is a conflict of interest.	A financial summary of the estimated State Forest budget and funding for FY 2014 was prepared at the request of the audit team for the certified area. A detailed Excel spreadsheet of estimated budget and funding sources was also provided. Note that timber harvests on the non-certified State Forests rarely occur and, if they do, only as detailed in section 1.3 of this report. MD DNR has four funding sources, including a General Fund, Special Fund, Federal Fund, and Reimbursable Fund. Income from timber sales falls under the Special Fund, which also includes other funding sources such as admission fees, user permits, non-timber forest products, rights-of-way, leases, and concessions among others. For FY 2014, here is a breakdown of each State Forest's estimated Special Fund: Eastern Region: • Chesapeake SF - ≈49% of Special Fund is from Timber Sales • Pocomoke SF – 0% of Special Fund is from Timber Sales Western Region: • Green Ridge SF - ≈62% of Special Fund is from Timber Sales • Savage River SF - ≈83% of Special Fund is from Timber Sales • Potomac Garrett SF - ≈87% of Special Fund is from Timber Sales Of annual Timber Sales, 25% of the revenue is paid to local counties where the State Forest system operates. The State Forest system has remained well below is annual allowable harvest rate during the past 10 years and has not increased the harvest rate to meet county funding needs. A summary of county payments is included in each State Forest's Sustainable Forest Management Plan. As a whole, the estimated Special Fund in FY 2014 (including both non-timber and timber income) currently covers about 70% of the entire certified State Forest Budget and is projected to meet approximately 87%. The rest of funding to meet the budget would come from the other Funds. Considering that hunt and agricultural leases are only permitted on the Chesapeake State Forests (which together make 51% of its Special Fund) and that forest cover is a larger percentage of land use in Western Maryland, from a financial standpoint it makes sense that revenue from Timber Sales as a percentage of the Special Fund would be higher in

	Western Maryland. Recreational uses of the State Forests do not always generate direct income for State Forests, but indirectly support local private businesses, such the hospitality industry. A detailed analysis for each State Forest's effect on the local economy is included in each State Forest's Sustainable Forest Management Plan. The main point is that MD DNR does not rely solely on funding from timber harvests. Given the demand for timber and non-timber uses of the State Forest system, MD DNR's funding sources are well-diversified. MD DNR is also subject to internal audits and external legislative audits to ensure that funds are received and appropriated according to applicable laws and regulations.
We really like the longer rotations for Loblolly pine. The longer rotations produce a higher quality timber that is difficult to find in other areas.	Many land managers in the Southeastern region of the United States do not grow pine on rotations of 60-80 years as MD DNR does. As long as release treatments remain timely and effective, MD DNR should be able to bring more of the Eastern region into higher quality stands. The higher grade material supports value-added production at local manufacturing facilities of Maryland and neighboring states, and may support Delmarva Fox Squirrel recovery efforts.
Social Concerns	

When an interested person makes their way to the MD DNR website, and finds the page for the State Forests, and then finds the page for the annual work plan, they are greeted by the comment "**Comment period closed."** There is no information on when it closed and when it will be open again. The comment period is not advertised to stakeholders. Comment period should be at the same time each year and it should be widely announced. Ideally a listserv should alert all interested persons and organizations. At present there is no way to sign up for alerts. I have been commenting on this lack of notification for eight years. No stakeholder comments are released and no responses are officially given. The 2014 annual work plan loaded up on the second try. The maps and the page numbers are a huge improvement over previous years. However the plan does not include any of the CAC comments or the Public Comments. *These should be included.*	The comment periods for Annual Work Plans (AWP) are open for 30 days. The comment period for the fiscal year 2015 plans was open from March 1 – 31 (http://www.dnr.state.md.us/forests/workplans/). Stakeholders that wish to make comments should email the MD DNR directly via the email contact provided. The comment period is announced on the MD DNR website and MD DNR makes a press release to media outlets. As of April 7, 2014, the website still showed the comment period details. In addition, MD DNR has a policy available for receiving and attending to grievances or complaints (http://www.dnr.state.md.us/forests/SFMGrievancePolicy.pdf). The contact information is on the main page for the Forest Service (http://www.dnr.state.md.us/forests/mdforests.asp). Citizen Advisory Council (CAC) comments and comments from the general public are documented in the AWP. For example, see the Eastern Region AWP for 2014, see page 114 of the PDF (http://www.dnr.state.md.us/forests/pdfs/ER_FY14AWP.pdf). See **Minor CAR 2014.6, OBS 2014.12** and **Major CAR 2014.14**.
On the Citizen Advisory Committees (CAC), with respect to the recruitment of native	MD DNR maintains four Citizen Advisory Committees (CAC): one for the Eastern Region and one for each of the three State Forests in the Western Region. The CAC list for the Eastern Region includes two representatives from two indigenous tribes of the region and the Western Region has one

peoples, students, etc – I have never seen a native person on the committee. They do not encourage people. I would ask for a role for how many people showed up for these and what they are doing to try to get representation. There are probably some federally recognized tribes in Maryland. I don't see any effort from Maryland DNR to get people on CAC.	indigenous representative. Tribal representatives contacted were unavailable for comment. Both student positions are currently vacant; however, most CAC positions are filled and include broad representation of stakeholder groups. These include ecologists, hunters, recreational users, indigenous people, wildlife biologists, conservationists, and mill owners among others. In the Eastern Region Annual Work Plan 2012, the CAC meeting notes indicate that an indigenous representative was present (November 9, 2011). Citizen Advisory Council (CAC) comments are summarized in each AWP. AWPs reviewed for the past three years have received comments from CAC members. This shows that the CAC process is consistently providing feedback to MD DNR.
Improvement shown in recreation but there is still a long way to go. The average non-hunter has no idea where they can recreate in the [Chesapeake State Forest] SF. The 'Wicomico – Green Hill Trails" were never advertised, and they were more about clearing roads than providing recreation. The Tom Tyler trail is logged along most of its length. Even the hiking and biking trails in PSF are logged right up to their edges.	MD DNR currently sells maps at public DNR facilities and advertises recreational opportunities on its website. User groups may also call MD DNR offices for information. MD DNR recognizes that certain user groups may not access the website in due time for planning activities and has initiated a process to both update the trail maps and put them in digital format for smartphone users. While these maps are complete for State Parks, which are outside of the scope of FSC, they have not been completed for the MD DNR Forest Service lands. The hiking and biking trails mentioned were logged prior to the installation of the trails. The trails were pre-flagged and slash was removed from the buffer areas around the trails. There were two sites where the pre-flagged trail was crossed and trees were harvested, but this was necessary for access and safety reasons. The trails were designed and installed in collaboration with the local mountain biking community. The trails show evidence of use and near their entrances large signs that describe acceptable uses have been installed.
Really glad that forest is certified and that we have someone that we can go to. In this case, I would like to see improvements [from MD DNR].	See findings related to MD DNR's stakeholder communication (**Minor CAR 2014.6, OBS 2014.12** and **Major CAR 2014.14**.).
Environmental Concerns	
Reading the introduction [to the Annual Work Plan FY2014 for Chesapeake] raised a number of	Not all existing forest roads in the Eastern Region are permanent. Some are used intermittently between management activities and may be allowed to grow over with brush, especially secondary roads or temporary skid trails. Access to certain roads is also necessary to conduct management and

questions: Is it ecologically preferable to keep all existing forest roads open (including ones that have grown over)? Does a second commercial thinning really help FIDS [Forest Interior Dwelling Species] (pg 9)? What effect does so much thinning really have on DFS [Delmarva Fox Squirrel]? I would like to see some data supporting these assumptions. In regard to FIDS, after reading the annual work plan, since people pay more attention to clearcuts, they are doing a lot more thinning. Some thinning areas are important for FIDS. FIDS are harmed by edge habitat and cow birds can get in there. Habitat for DFS- I have never seen any data/ information on that this does not harm it. Both Eastern Forests, Chesapeake and Pocomoke, are managed the same way. So my comments apply to both.	monitoring activities, including of rare or threatened ecosystems and species. Certain roads in the Eastern Region are closed permanently as part of hydrological restoration work. However, these restoration projects involve consultation with a large number of stakeholders since hydrological restoration may impact adjacent land uses. Any restoration projects are detailed in the AWPs. See http://www.dnr.md.gov/forests/programapps/wbfm.asp for more information on MD DNR's hydrological restoration projects. Loss of mature forests and mast-producing trees has been one of the drivers of DFS decline according to USFWS (http://www.fws.gov/ecos/ajax/docs/recovery_plan/930608.pdf and http://www.fws.gov/endangered/esa-library/pdf/squirrel.pdf). A second thinning promotes the growth of larger trees in stands and is in line with restoration of DFS populations. In consultation with USFWS, MD DNR is using longer rotations and second thinning of Loblolly pine to maintain existing DFS habitat or create possible DFS habitat. A part of MD DNR's strategy also includes areas where timber harvest is not allowed. Without a second thinning on managed stands, pine stands likely will become overstocked and subject to insect outbreaks and/or fire. While periodic naturally occurring fires can create growing conditions for larger surviving trees, current stand structure would likely lead to stand-replacing crown fires and could threaten human populations in the wild-urban interface. So the second thinning is a part of an overall strategy to lengthen the rotation of the Loblolly pine stands to produce larger trees more quickly than in an unmanaged stand. Together with MD DNR's retention of hard-mast producing species such as oak within these stands and DFS translocations, recovery of DFS on MD DNR-managed land may be possible through these management practices. By use of the second thinning, MD DNR is able to lengthen the rotation of Loblolly pine to 60-90 years depending on site quality and other factors such as insects, disease or fire. Clearcuts may still occur as part of the management cycle, but occur later than in intensive Southern Yellow Pine management and with greater amounts of clumped and dispersed retention. MD DNR is actually behind on some of its allowable thinning operations and well within its annual allowable harvest rate. So not as much thinning as described in AWPs is taking place. {NOTE: a finding related this was issued in the SFI report, but is also relevant to FSC indicator 5.6.c.). Edge-effects depend on the size of a stand, road and skid trail density, road maintenance practices, stream and property boundary buffers, and other areas of retention. So it is difficult to predict how much edge habitat is created generally on a given thinning site. However, MD DNR staff and contractors now pre-designate skid trails on thinning and seed-tree harvest sites of the Eastern Region in order to control density.

A few specific projects stood out as particularly undesirable. In Worcester County P02 Tract 4, Stand 19 is 36 acres of almost 100 year old forest. A rare older forest, it is an 'old island' in a sea of younger forest. It is in a DFS core area. A harvest is planned which could take up to 95% of the standing trees. It would fragment a much larger forested area. *This should be removed from the work plan.* They are cutting older areas just to make profit. Young pine mostly, but there are small forest areas that are mixed and older- they are converting these to pine. They have converted pine-oak-beech-maple-dogwood-hickory converted to pine. When they describe these areas, they emphasize pine and they have ruined the forest. They claim to be encouraging oaks. They say that they want to encourage oak, but this clearcut has pine regeneration. So many reasons why it shouldn't be cut. They really don't change in response to comments and they do not announce when comment period is for public.	The site in question is a 37-acre FY2014 proposed variable retention harvest of loblolly pine with retention of oak and pine to enhance DFS habitat. The stand is in a DFS Future Core management area, thus no DFS are currently present. This stand regenerated naturally ~1917 and previously was under agriculture according to aerial photos. Prevention of insect outbreaks, and recruitment and establishment of oak were cited as objectives for the variable retention harvest, though retention has not yet been marked. MD DNR's interdisciplinary (ID) team, the CAC and public review processes did not generate any comments. The ID team and CAC include wildlife experts and stakeholders. MD DNR followed its consultation processes and this area does not meet the FSC-US Type 1 or Type 2 Old Growth definitions. No nonconformance is warranted. Adjacent stands have been pre-commercially thinned with an emphasis on release of vigorous pines and oaks and removal of tolerant hardwoods. Not all tolerant hardwoods are removed, however. While pine is the dominant species, post-harvest oak density has increased. Most other 70-year old stands are in other zones, and most are protected from timber harvest activities. Here is the current breakdown of species group distribution for the Eastern Region:  Pines are among the first species to establish after regeneration harvests. Sites observed during the 2014 audit in the Eastern Region had retention of trees in clumps and dispersed individuals. Clumps include pines and hardwood species. Large clumps typically are not treated with herbicide post-harvest, so all species may persist on-site. AWPs are revised in response to CAC and stakeholder comments. However, see **OBS 2014.12.**
Other harvests I question are P07 Tr 23 Stand 1.	P07, T23, S1 is a first thinning of loblolly pine for FY2014 retaining 80-90 ft2 BA and mast trees for future DFS habitat. There is a 6-acre section of

Why? Fragmentation. P07 Tr22 Stand 4. How will this affect Corker's Creek?	designated potential future DFS habitat and is nearby an adjacent designated future late successional stand. During this first thinning, vigorous pines will be retained as well as oak trees for mast. So vertical and horizontal structure for wildlife will remain. Edge-effects are minimal and no forestland is being converted to non-forest use in this harvest. Habitat fragmentation is therefore not a concern in this stand for this harvest. While SCS did not visit P07, T22, S4, it is a pre-commercial thinning operation that is typical of the Eastern Region: suppressed pine trees and tolerant hardwoods (usually gum and poplar) are mechanically felled using hand-held equipment. No skid trails or secondary roads are constructed/ maintained for these operations and thinning material is left in the field for nutrient cycling. No equipment that can fell larger diameter trees is brought on-site. Thus potential negative impacts to Corker's Creek are likely minimal.
Looking at this plan [Chesapeake Annual Work Plan FY2014] I wondered how [The Nature Conservancy] TNC and the [State Forest] SF are working together for landscape restoration of some areas. Or aren't they?	TNC has a representative on the CAC who comments on most AWP. SCS was granted permission from TNC to include its response to the stakeholder comment regarding the Eastern Region: *TNC (MD/DC Chapter) has a long history of collaboration with MD DNR Forestry. Some specific projects include strategic land protection within the Pocomoke watershed where our land protection team works with DNR partners to identify and facilitate acquisition/protection of important properties through fee simple purchase or conservation easements, and which often involves collaboration on grant writing and leveraging funds available to one organization or the other. We have a number of floodplain reconnection projects, also within the Pocomoke River watershed, that either take place on state lands or have some element of DNR participation in the process. We also collaborate with DNR Forestry when carrying out our prescribed burn program, where they frequently allocate resources to assist us (Burn Boss, equipment, and trained crew). We have conducted prescribed burns spanning both ownerships (DNR and TNC) for restoration purposes within ecologically significant areas, and have plans to do more of this type work in the future.* *Floodplain Restoration* • *We are working with DNR to restore a floodplain along Horsebridge Branch in Nassawango Watershed. DNR owns property on one side of the stream and TNC owns the land on the opposite side of the stream. This site is also a monitoring site that is part of a larger USDA funded research/ monitoring effort to evaluate water quality benefits of floodplain restoration.* • *DNR is a partner in the Pocomoke Conservation Partnership where we are targeting wetland restoration and protection projects to achieve water quality and habitat benefits. We currently have funding from a grant under the Chesapeake and Coastal Bays Trust Fund that is aimed at demonstrating a process for achieving efficient and effective water quality improvement with targeted*

	restoration. We currently have over 550 acres enrolled to be restored under this grant. These areas are all forested floodplains along the channelized portion of the Pocomoke River. *Land Protection* • *DNR Program Open Space and Forest Service, the USFWS and TNC were recently awarded a $1 million North American Wetlands Conservation Act grant to protect 1000 acres of forest in the Pocomoke watershed. The property will be added to the Pocomoke State Forest and restored and managed as native coastal plain hardwood/pine forest for migratory bird habitat. The grant will be matched with POS funds and TNC's purchase of 750 acres to be restored with native forest on the headwaters of Nassawango Creek. This is the third NAWCA grant awarded to the Pocomoke Partnership in the last few years, where over 2000 acres of native forest has been permanently protected and sustainable managed for migratory bird habitat.* • *TNC in coordination with DNR, Somerset and Worcester Counties continue a 5-year partnership to protect lands in the Dividing Creek watershed adjacent to the Pocomoke State Forest. Under DNR's Dividing Creek Rural Legacy Area (RLA) program, TNC administers the yearly grants and negotiates conservation easements that are used to permanently protect forests and other resources. Recently 591 acres of forest were protected in Worcester County under the RLA and protection of another 200 acres of native hardwood forest in Somerset County is in progress.*
When I say to forest manager, "could you tell me an area that you are not planning to keep in timber production of the 1600 acres [on Chesapeake State Forest]?" they can't tell me. I feel like for a balanced certified forest, there need to be some areas that are allowed to get older.	Much of the Eastern Region is either in protected areas, which are under passive management, or areas where management objectives for species' or ecosystems' recovery have been established. Certain areas, such as DFS and FIDS, are management to later succession. However, some of these areas can be managed to move throughout the landscape over time. This information is available in a presentation that MD DNR staff occasionally give publicly. • Delmarva Fox Squirrel – 37% • General Management – 22% • ESA Zone 1 – 18% (RT&E or high-quality natural community, plus a buffer; Occasional one-time harvest allowed) • ESA Zone 2 – 1% (Secondary buffer for Delmarva Bays and Amphibian "life zone"; Thinning & selective harvest allowed) • ESA Zone 3 Pulpwood – 4% (RT&E population expansion area; Pulpwood rotations allowed (age 15 - 20)) • ESA Zone 3 Saw Timber – 3% (RT&E population expansion area; rotation with a group or single tree selection, or a final harvest allowed) • CORE FIDs – 9% • Forested Riparian Buffers – 5% • Rare Community - Soil Types – 1%

	• Wetlands of Special State Concern – 0% • Old Growth Management Areas – 0%

4. Results of The Evaluation

Table 4.1 below, contains the evaluation team's findings as to the strengths and weaknesses of the subject forest management operation relative to the FSC Principles of forest stewardship. Weaknesses are noted as Corrective Action Requests (CARs) related to each principle.

4.1 Notable Strengths and Weaknesses of the FME Relative to the FSC P&C.

Principle / Subject Area	Strengths Relative to the Standard	Weaknesses Relative to the Standard
P1: FSC Commitment and Legal Compliance	Payment of timber harvest funds to counties occurs in a timely manner.	OBS 2014.1, CAR 2014.2, OBS 2024.3
P2: Tenure & Use Rights & Responsibilities	MD DNR involves many tenure and use rights holders in the management and monitoring of these resources.	None
P3: Indigenous Peoples' Rights	Though this Principle is not applicable to MD DNR, it maintains contact with tribal organizations in Maryland and has three tribal representatives on the Citizen Advisory Committee.	NA
P4: Community Relations & Workers' Rights	MD DNR was one of the few forest managers that had active timber sales during the economic downturn, which helped some local logging contractors and mills stay in business.	CAR 2014.4, OBS 2014.5, CAR 2014.6
P5: Benefits from the Forest	MD DNR has a diverse forest product base that includes markets for softwoods and hardwoods. Non-timber income sources support a number of forest management activities.	None
P6: Environmental Impact	MD DNR exceeds stream management zone protection measures large streams. Herbicide use is managed to minimize use and avoid disturbance to soils.	CARs 2014.7, 2014.8 and 2014.9
P7: Management Plan	All management planning documents are available to the public. Given the size and scale of management, MD DNR maintains a smaller set of documents as that of comparably	CARs 2014.10 and 2014.11, and OBS 2014.12

	sized state DNRs.	
P8: Monitoring & Assessment	MD DNR has kept on schedule with its forest inventory for many years. Monitoring information on RTE species is being used to expand RTE species' recovery efforts.	CAR 2014.13 and Major CAR 2014.14
P9: High Conservation Value Forests	The HCVF classification process involved a broad number of stakeholders with knowledge of potential HCVs and the HCV classification process.	None
P10: Plantations	MD DNR has successfully moved the FMU away from plantation management and to natural forest management.	NA
Chain of custody	No exceptional strengths noted.	CAR 2014.15
Group Management	NA	NA

4.2 Process of Determining Conformance

4.2.1 Structure of Standard and Degrees of Nonconformance

FSC-accredited forest stewardship standards consist of a three-level hierarchy: principle, the criteria that correspond to that principle, and the performance indicators that elaborate each criterion. Consistent with SCS Forest Conservation Program evaluation protocols, the team collectively determines whether or not the subject forest management operation is in conformance with every applicable indicator of the relevant forest stewardship standard. Each nonconformance must be evaluated to determine whether it constitutes a major or minor nonconformance at the level of the associated criterion or sub-criterion. Not all indicators are equally important, and there is no simple numerical formula to determine whether an operation is in nonconformance. The team therefore must use their collective judgment to assess each criterion and determine if the FME is in conformance. If the FME is determined to be in nonconformance at the criterion level, then at least one of the applicable indicators must be in major nonconformance.

Corrective action requests (CARs) are issued for every instance of a nonconformance. Major nonconformances trigger Major CARs and minor nonconformances trigger Minor CARs.

4.2.1 Interpretations of Major CARs, Minor CARs and Observations

Major CARs: Major nonconformances, either alone or in combination with nonconformances of all other applicable indicators, result (or are likely to result) in a fundamental failure to achieve the objectives of the relevant FSC Criterion given the uniqueness and fragility of each forest resource. These are corrective actions that must be resolved or closed out before a certificate can be awarded. If Major CARs arise after an operation is certified, the timeframe for correcting these nonconformances is

typically shorter than for Minor CARs. Certification is contingent on the certified FME's response to the CAR within the stipulated time frame.

Minor CARs: These are corrective action requests in response to minor nonconformances, which are typically limited in scale or can be characterized as an unusual lapse in the system. Most Minor CARs are the result of nonconformance at the indicator-level. Corrective actions must be closed out within a specified time period of award of the certificate.

Observations: These are subject areas where the audit team concludes that there is conformance, but either future nonconformance may result due to inaction or the FME could achieve exemplary status through further refinement. Action on observations is voluntary and does not affect the maintenance of the certificate. However, observations can become CARs if performance with respect to the indicator(s) triggering the observation falls into nonconformance.

4.2.2 Major Nonconformances

☐	No Major CARs were issued to the FME during the evaluation. Any Minor CARs from previous surveillance audits have been reviewed and closed prior to the issuance of a certificate.
☒	Major CARs were issued to the FME during the evaluation, which have all been closed to the satisfaction of the audit team and meet the requirements of the standards. Any Minor CARs from previous surveillance audits have been reviewed and closed prior to the issuance of a certificate.
☐	Major CARs were issued to the FME during the evaluation and the FME has not yet satisfactorily closed all Major CARs.

4.2.3 Existing Corrective Action Requests and Observations

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

section of some of these same roads have been completed.	
Corrective Action Request *(or Observation)*: The FME should consider investigating an expedited method to facilitate the permit application and review process in an attempt to maintain the transportation system.	
FME response *(including any evidence submitted)*	There has been a great amount of resources given to the state forest roads projects. This has begun not only after the 2013 audit but years before, including: • Completion of the state forest roads inventory. • Establishing state forest roads maintenance priority list. • Meeting with Maryland Department of the Environment (sediment control agency), Waterway Construction Division, Nontidal Wetlands Division, Sediment and Erosion Control Division on site and at MDE headquarters. • Numerous meetings with DNR Engineering and Construction staff to introduce the magnitude of the state forest roads issue and need for action. • Securing $900,000 in DNR Critical Maintenance funding (unprecedented) dedicated to state forest roads maintenance issues in Western Maryland • Establishing procedures with DNR Engineering and Construction and Maryland Department of the Environment on state forest roads work. • Completing all analysis, documentation and permit work for the Potomac Garrett State Forest Lost Land Run project (estimated cost $300,000+). Permit approval is expected in May, with the contract announcement and awarding later in 2014. • Begin preliminary work on the next two projects on the priority list at Green Ridge State Forest. • Completed documentation to have all other state forest road projects on the priority list added to the regular DNR Critical Maintenance list. • Continued to secure additional Recreational Trail Grants for other road and trail work. **Documentation** 1. Forest Roads Management For Forest Operations on Maryland State Forests (attached). 2. DNR Engineering and Construction letter and documentation (attached).
SCS review	FME has made significant progress in securing funding for road work, identifying key needed repairs and upgrades, and working with permit/ application review staff to identify methods to increase efficiency. While the processes of dialogue have slowed due to staff turnover among permitting staff, this is expecting to resume in the coming months. FME has demonstrated that it has committed more time and resources to attending this subject area.
Status of CAR:	[X] Closed [ ] Upgraded to Major [ ] Other decision (refer to description above)

	Finding Number: 2013.2
Select one: [ ] **Major CAR** [ ] **Minor CAR** [x] **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	

Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator(s):	**US Forest Management Standard Indicator 8.2.d.1**
Non-Conformity *(or Background/ Justification in the case of Observations)*: Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective. However, monitoring by local forestry staff or by the internal silvicultural audit system did not document one case where harvest prescriptions and guidelines may not be effective. Excellent stump spots and prescription implementation observed at previous and subsequent sites lead auditors to conclude that the issues observed and described at Bowman Hill are an anomaly.	
Corrective Action Request *(or Observation)*: This FME should consider reviewing its internal silvicultural audit protocol to ensure consistent conformance with this indicator.	
FME response *(including any evidence submitted)*	Since the one observation from the 2013 audit the practice of applying clearly observable stump stops and tree markings have been given increased attention. While we believe this issue is not a chronic one, our internal field audit did pay close attention to tree markings and discussed this observation with the forest management staff. Some staffs have resolved to photograph the tree spots since during a harvest they can be rubbed off from skidder activity. The MD DNR Forest Service Internal Silvicultural Audit has gone through some evolution. At first we attempted the use of more lengthy forms and larger review teams, after a few iterations have settled on a more stream-lined approach with a single page form and a review team that includes the Regional Forester (state forest staff supervisor) and the Environmental Specialist (Annapolis Headquarters). This allows for more nimble and though reviews of the year's activities.
SCS review	Reviews of updated forms show that staff are indeed using the new forms effectively to record monitoring observations in the field. Stump-paint markings observed in the field during 2014 were lower on the stump and observable after harvest.
Status of CAR:	☒ Closed ☐ Upgraded to Major ☐ Other decision (refer to description above)

4.2.4 New Corrective Action Requests and Observations

	Finding Number: 2014.1
Select one: ☐ **Major CAR** ☐ **Minor CAR** ☒ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	

Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☐ Next audit (surveillance or re-evaluation) ☒ Other deadline (specify): None
FSC Indicator:	FSC-US Indicator 1.3.a.
Non-Conformity (*or justification*):FME's management plans and supporting documents are based on state laws and regulations, many of which were ratified to comply with federal laws that require compliance to international treaties. For example, the Endangered Species Act is relevant to the Convention on Biological Diversity. However, the FME has not conducted an analysis of international binding agreements to determine applicability.	
Corrective Action Request (*or Observation*): FME should conduct an analysis of international binding agreements to determine which are applicable to its management system so that it can ensure that forest management plans and operations comply with relevant provisions of said agreements.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.2
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 1.6.a
Non-Conformity (*or justification*): FME describes the importance of FSC to its management system and is now subject to a law that requires that it maintain conformance to forestry certification requirements. However, FME does not have an explicit publicly available statement of commitment to manage the FMU in conformance with FSC standards and policies.	
Corrective Action Request (*or Observation*): FME shall prepare a publicly available statement of commitment to manage the FMU in conformance with FSC standards and policies.	
FME response *(including any evidence submitted)*	
SCS review	

Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.3
Select one: ☐ **Major CAR** ☐ **Minor CAR** ☒ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☐ Next audit (surveillance or re-evaluation) ☒ Other deadline (specify): None
FSC Indicator:	FSC-US Indicator 1.6.c.
Non-Conformity (*or justification*): FME is in the process of evaluating land acquisitions for incorporation into the FMU. FME does not have a formal process for informing the CB of significant changes in ownership and/or significant changes in management planning within 90 days of such change. Note that FSC-US has not defined what a significant change is.	
Corrective Action Request (*or Observation*): FME should consider developing a policy or procedure for when to notify the Certifying Body of significant changes in ownership and/or significant changes in management planning within 90 days of such change.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.4
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 4.2.b.
Non-Conformity (*or justification*): Large-sale contracts reference safety requirements for both Eastern and Western Regions. However, small-sale contracts, which are contracts for services valued at less than $5,000, do not include safety requirements.	
Corrective Action Request (*or Observation*): Contracts or other written agreements shall include safety requirements.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.5
Select one: ☐ **Major CAR** ☐ **Minor CAR** ☒ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☐ Next audit (surveillance or re-evaluation) ☒ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 4.2.b.
Non-Conformity (*or justification*): According to 4.2.b, FME's employees and contractors must demonstrate a safe work environment. Migrant workers under the H-2B program were conducting tree planting activities. Some workers on-site independently stated that they were nursing students. However, no one on the job site was able to present evidence of certified First AID/CPR training. Working conditions and terms must comply with all applicable Federal, State and local employment laws, including health and safety laws. The audit team contacted the Maryland Department of Labor to inquire about First AID/CPR requirements for job sites, but did not receive a response.	
Corrective Action Request (*or Observation*): FME should investigate what the First AID/CPR requirements are for employees of tree planting/TSI contractors and determine what corrective actions, if any, are warranted.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.6
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 4.4.a and 4.4.d.
Non-Conformity (*or justification*): 4.4.a: A summary of social impacts that covers the elements of indicator 4.4.a was not available. 4.4.d: Overall, FME's Timber Operations Order directs how the public consultation process is to be followed according to indicator 4.4.d. While it states that the AWP is to include the Public Comments, and outlines the review by the interdisciplinary team, it does not specifically state that a 30-day public review is required. Also the Western Maryland state forests' Sustainable Forest Management Plans all state that a 30-day public review process is required (SRSF pg 14, PGSF pg 16, GRSF pg 12). However, the Chesapeake Forest/Pocomoke plan does not.	
Corrective Action Request (*or Observation*): A summary of social impacts that covers the elements of indicator 4.4.a shall be made available. 4.4.d: For ***public forests,*** consultation shall include the following components: 1. Clearly defined and accessible methods for public participation are provided in both long and short-term planning processes, including harvest plans and operational plans; 2. Public notification is sufficient to allow interested stakeholders the chance to learn of upcoming opportunities for public review and/or comment on the proposed management; 3. An accessible and affordable appeals process to planning decisions is available. 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.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.7
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	

Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 6.3.f (b), 6.3.g.1 and Appalachian Regional Indicator 6.3.g.1.a.
Non-Conformity (*or justification*): GR-02-13 (post-ice storm salvage harvest) and PGSF 34-3 (clearcut with variable retention) utilized even-aged silviculture. Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes, particularly in relation to vertical and horizontal complexity. Live trees on these sites were not retained in a manner consistent with the proportion and configuration of the natural disturbance regime. For example, live small diameter white oaks were designated for removal where crown competition was not yet a significant factor in the salvage area; and live oaks were not well-distributed spatially in the clearcut with variable retention (live oaks were retained only in islands).	
Corrective Action Request (*or Observation*): In the Western Region, when even-aged systems are employed, and during salvage harvests, live trees and other native vegetation shall be retained within the harvest unit as described in indicators, 6.3.f (b), 6.3.g.1 and Appalachian Regional 6.3.g.1.a. Operational constraints, future economic value of retained trees, and effects on desired regeneration can be taken into account.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.8
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 6.5.e.1 (Appalachian Regional indicators 6.5.e.1.a-g) and 6.5.e.2.
Non-Conformity (*or justification*): SMZ guidelines are provided in SFMPs for each state forest and actual SMZs are mapped in the GIS. FME prepared the Western Maryland Erosion and Sediment Control Standards and Specifications for Forest Operations in 2011 that contains SMZ widths based on the "50' + (4' * x%)" principle. For smaller slope %, such as those between the APP 1-10% and 11-20% category, minimum widths depart from the minimum widths required by FSC. For larger slope %, FME's SMZ widths exceed APP requirements. These SMZs are based on watershed studies and have been reviewed by the FME's hydrologist. Minor variations from the minimum widths are permitted as long as the provisions of indicator 6.5.e.2 are met. FME has not sought a variance per these requirements, such as the requirement of input from an independent expert in aquatic ecology or closely related field.	
Corrective Action Request (*or Observation*): FME shall either bring its SMZ widths into conformance with Appalachian Regional indicators 6.5.e.1.a-g or seek a variance per indicator 6.5.e.2. If the 6.5.e.2 option is selected, an independent expert in aquatic ecology or closely related field must be made available for consultation to the CB.	
FME response *(including any evidence submitted)*	**August 2014**: The Maryland state forests within the Appalachian Region have been following the established rule of a 50-foot minimum buffer plus an additional four feet width for each percentage of slope. For example, a ten percent slope would require a 90-foot SMZ buffer (50+(10*4)). This guideline has been the Maryland standard since the early 1980s and is based on the following research: Trimble, George R., Jr.; Sartz, Richard S. 1957. How far from a stream should a logging road be located? Journal of Forestry 55:339-341 This research is given greater examination in the document referenced below and is available online: **Filter Strip Widths for Forest Roads in the Southern Appalachians** **Lloyd W. Swift, Jr.,** *USDA Forest Service, Southeastern Forest Experiment Station, Coweeta Hydrologic Laboratory, Otto, NC 28763* webdoc >> http://coweeta.uga.edu/publications/397.pdf As the text describes, the Trimble/Sartz research established an acceptable stream buffer width to properly protect municipal watershed streams during forest harvesting. This simple to remember formula established a base width at 50-feet and was increased based on road slope of an additional four feet for each percent of slope. Thus a one

	percent slope would establish a buffer of 50+(1*4) = 54' or ten percent slope 50 + (10*4) = 90'. Maryland has completed BMP effectiveness studies and found these practices effective in preventing sedimentation of streams from forest harvesting practices. Also, the DNR Forest Service will be collecting further BMP effectiveness data over the next few years which will again include state forest harvest sites. **Forestry Best Management Practices In Maryland: Implementation and Effectiveness for Protection of Water Resources (2009)** webdoc >> http://www.dnr.state.md.us/forests/pdfs/MDForestBMPResults2006.pdf One of the highlights from this research was that BMP compliance with water quality BMPs on State lands was 99%, higher than the statewide average (see Figure 11). **Evaluating the Effectiveness of Maryland's Best Management Practices For Forest Harvest Operations (1995)** webpage >> http://www.dnr.state.md.us/forests/mbmp/ A study of implementation of Maryland's BMPs by Maryland DNR - Forest Service (Koehn and Grizzel 1995) indicated that most loggers across Maryland followed these BMPs. This project took the next logical step, an attempt to determine whether Maryland's Best Management Practices, when used as specified, are effective in protecting water quality, i.e., that sediment, temperature and biological activity are only minimally impacted by forest harvest activities, and that the in-stream parameters measured in this study return to pre-harvest conditions relatively quickly. While there have been studies in other states which address the concern of adequacy of timber harvest BMPs (Adams et al.1995; Whipkey 1991) this is the first significant study done in Maryland, using Maryland BMPs in local conditions, with local logging contractors, and using relatively comprehensive and sophisticated monitoring and analysis techniques. This report documents the activities conducted during this four-year experiment, discusses the findings, and draws conclusions based on these findings. webpage: http://www.dnr.state.md.us/forests/mbmp/mbmpfho1.html Below is a table demonstrates the variations between the Maryland DNR SMZ widths and those prescribed in FSC Appalachian Regional indicators 6.5.e.1.a-g. Essentially, the DNR guidelines offer a progressive buffer width that increases relative to the slope while the FSC prescription is a stepped system, widening at certain slope intervals. Based on research DNR has completed specific to our conditions, we have found the 50+4 formula to be effective in preventing sediment from entering streams during a forest harvest. Also, this formula is easy to remember for foresters responsible for planning a forest harvest near the SMZ and for logging operators to implement since it has been in place for many years and part of our logger education program. A case could be made that while the effectiveness of the DNR SMZ guidelines have

proven to be effective and that the only area of deficiency (compared to the FSC rule) would be on the lower grade slopes (1-7 and 11 percent) of perennial streams (not intermittent streams) where water is far less likely to move sediment into a stream course. As for the higher percent slopes the DNR SMZ width far exceeds that of the FSC recommendation and the DNR SMZ guidelines offer greater stream protection than the FSC formula.

Harvesting Within the SMZ

The FSC guidance for the most restrictive scenario (intermittent/high-quality waters) does not allow any harvesting within the 25-foot inner SMZ, while the DNR guidance has a 50-foot no-cut buffer. While the DNR guidance does not distinguish between an intermittent and perennial stream, FSC would allow single-tree or small group selection within the inner SMZ of non-high-quality intermittent streams where DNR does not.

Revised Best Management Plan guidelines for forest harvest operations have been drafted (currently in review) that would adopt a less restrictive 50+2 rule across the state. However for DNR state forest operations, it has been decided to maintain the more protective 50+4 rule.

FSC 2014.7		perennial			intermittent		
slope%	DNR	FSC	diff	diff%	FSC	diff	diff%
0	50	80	30	60	40	10	(20)
1	54	80	26	48	40	14	(26)
2	58	80	22	38	40	18	(31)
3	62	80	18	29	40	22	(35)
4	66	80	14	21	40	26	(39)
5	70	80	10	14	40	30	(43)
6	74	80	6	8	40	34	(46)
7	78	80	2	3	40	38	(49)
8	82	80	(2)	(2)	40	42	(51)
9	86	80	(6)	(7)	40	46	(53)
10	90	80	(10)	(11)	40	50	(56)
11	94	100	6	6	50	44	(47)
20	130	100	(30)	(23)	50	80	(62)
21	134	130	(4)	(3)	60	74	(55)
30	170	130	(40)	(24)	60	110	(65)
31	174	135	(39)	(22)	70	104	(60)
40	210	135	(75)	(36)	70	140	(67)
41	214	165	(49)	(23)	80	134	(63)

The diff and diff% table figures indicate FSC vs DNR where a figure in black indicates FSC exceeds DNR and red where FSC is less than DNR.

MD DNR contacted Dr. Michael Aust, Professor of Forestry at Virginia Tech, as an

	independent authority. He has read the attached documentation and is willing to support our case for this variance request. MD DNR conducted a DD BMP evaluation from 2003-2005, the results of which can be found here: http://www.dnr.maryland.gov/forests/pdfs/MDForestBMPResults2006.pdf. MD DNR is currently repeating the study and has just started data collection. Another MD study in the Piedmont did more evaluation of in-stream conditions and benthic community, using standard MD BMPs. http://www.dnr.state.md.us/forests/mbmp/
SCS review	**September 2014**: SCS interviewed Dr. Aust on September 19, 2014. Dr. Aust's research focuses on the effectiveness of stream buffer widths in controlling sediment deposition into streams and BMP effectiveness. In relation to the topic of stream buffer widths, he has found in peer-reviewed research in West Virginia and other Appalachian States that buffers for the slope ranges cited in the CAR, that a 25 ft. buffer is as effective in terms of sediment control. One study compared 25 ft. buffers no-cut to 50 ft. buffers no-cut, and 50 ft. buffers that were thinned, and showed no significant difference on areas of 50-100% slope. Dr. Aust provided the citation for a current paper on this topic, which builds upon past research in this region (Lakel *et al.* 2010. Sediment Trapping by Streamside Management Zones of Various Widths after Forest Harvest and Site Preparation. Forest Science, Volume 56, Number 6, December 2010, pp. 541-551(11)). Given that all of MD DNR's buffer widths have a minimum of 50 ft., MD DNR is at low risk for failure to provide equivalent or greater protection than the minimum FSC buffer width. In fact, in most cases, MD DNR's minimum buffer widths exceed the minimum FSC minimums. More importantly, as long as road and skid trail BMPs are being adhered to, the current buffer widths should remain effective.
Status of CAR:	☒ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.9
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 6.6.b and 6.6.d.
Non-Conformity (*or justification*): 6.6.b: The SFMPs contain justification for chemical use in certain situations; however, not all situations are provided with explicit justification. Written strategies have not been developed that justify the use of chemical pesticides. 6.6.d: Written prescriptions are not prepared per the requirements of indicator 6.6.d. Written prescriptions prepared by the FME do not contain all provisions (both Regions). In the Eastern Region, the audit team observed that when a contractor applies chemicals, a partial prescription is prepared in the care of aerial applications.	
Corrective Action Request (*or Observation*): 6.6.b: FME shall provide justification for chemical use and develop a written strategy that justifies the use of chemical pesticides per indicator 6.6.b. 6.6.d: FME shall ensure that its chemical use prescriptions address the provisions of indicator 6.6.d.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.10
Select one: ☐ **Major CAR** ☐ **Minor CAR** ☒ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☐ Next audit (surveillance or re-evaluation) ☒ Other deadline (specify): None
FSC Indicator:	FSC-US Indicator 7.1.h and 7.1.l.
Non-Conformity (*or justification*): 7.1.h: FME has a nonconformance to some indicators of C6.6. If chemicals are used, the management plan must describe what is being used, applications, and how the management system conforms to Criterion 6.6. FME's chemical use strategy may change as a result of the nonconformance, which may require an update to sections of the management plan. 7.1.l: FME has developed its own silvicultural terms in both the Eastern and Western Regions. In certain cases, these depart from commonly used definitions. In the Western Region, staff used the terms "clearcut with variable retention," "variable retention," and "second step of a shelterwood" for the same harvest area. In the Eastern Region, the seed-tree system in use for pond pine restoration does not include a seed-tree removal step (i.e., the seed-trees are retained). However, the Annual Work Plan 2014 for the Eastern Region provides a definition for the FME's seed-tree harvest system. Such definitions are not provided for the Western Region.	
Corrective Action Request (*or Observation*): 7.1.h: FME should update the management plan to include an explanation of how the management system conforms to Criterion 6.6. 7.1.l: FME should include a description of commonly used silvicultural systems of the Western Region in the management plan.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.11
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 7.1.p and 7.1.q.
Non-Conformity (*or justification*): 7.1.p: The management plan does not describe and justify the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource. A partial explanation is provided in the SFMP for the Eastern Region; however, terms such as "conventional logging equipment" are not defined and/or described. An example of "shovel-logging" is provided for low-impact equipment. No descriptions and justifications are provided in the management plans for the Western Region. 7.1.q: Annual Work Plans, or other site-specific plans, do not clearly describe the relationship of planned management activities to objectives and desired outcomes defined in the SFMPs. A review of AWPs for both the Eastern and Western Regions confirmed that such relationships are not explicitly stated.	
Corrective Action Request (*or Observation*): 7.1.p: The management plan shall describe and justify the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource. 7.1.q: Annual Work Plans, or other site-specific plans, shall clearly describe the relationship to objectives and desired outcomes defined in the SFMPs.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.12
Select one: ☐ **Major CAR** ☐ **Minor CAR** ☒ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☐ Next audit (surveillance or re-evaluation) ☒ Other deadline (specify): None
FSC Indicator:	FSC-US Indicator 7.4.b.
Non-Conformity (*or justification*): FME makes draft management plans, revisions and supporting documentation easily accessible for public review and comment prior to their implementation via the website. FME addresses public comments and modifies the plans to ensure compliance with FSC requirements. Evidence reviewed includes draft documents and plans that were modified after comments were reviewed. All comments from the interdisciplinary team and the public are included in appendices of the AWPs; however, a clear explanation as to how the comments were considered is not provided to stakeholders.	
Corrective Action Request (*or Observation*): FME should consider providing an explanation as to how public comments were considered in the modification of management plans (e.g., SFMPs, AWPs).	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.13
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 8.2.d.3
Non-Conformity (*or justification*): FME conducts many socioeconomic analyses and monitoring activities through partnership with other departments within the DNR and other state or federal agencies. However, a formal monitoring system that addresses the components of indicator 8.2.d.3 has not been determined. For example, FME has not defined which monitoring activities currently conducted are relevant to the achievement of its mission and socioeconomic objectives.	
Corrective Action Request (*or Observation*): FME shall monitor relevant socioeconomic 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).	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.14
Select one: ☒ **Major CAR** ☐ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☒ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☐ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-US Indicator 8.5.a.
Non-Conformity (*or justification*): Partial monitoring results are made available for the Chesapeake State Forest via the website. However, for other State Forests (Eastern and Western), a summary of results or the full results of the most recent monitoring information is not being maintained. The content must address the indicators listed in Criterion 8.2, and be made available to the public, free or at a nominal price, upon request.	
Corrective Action Request (*or Observation*): While protecting confidentiality, either full monitoring results or an up-to-date summary of the most recent monitoring information shall be maintained, covering the Indicators listed in Criterion 8.2, and be made available to the public, free or at a nominal price, upon request.	
FME response *(including any evidence submitted)*	**Forest Stewardship Council Audit 2014 – Response to Major CAR** **Indicator 8.2.a.1** For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality. ***FMU Response:*** *A complete forest re-inventory is in progress, entering year four of five, for the Western State Forests and will begin in 2014 for the Eastern state forests (Pocomoke State Forest and Chesapeake Forest). Some preliminary analysis has been completed and is available under the Monitoring sections for the relevant state forest webpage. The most recent forest inventories were completed in 2002 for the western state forests, in 2009 for Pocomoke State Forest and in 2004 for Chesapeake Forest. Results are found in the Sustainable Forest Management Plan's available online on the relevant state forest webpages.* **Indicator 8.2.a.2** Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information includes date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative. ***FMU Response:*** *This information, unanticipated removal or loss or increased vulnerability of forest resources, would be expressed in each of the state forest annual work plans which is made publically available on the relevant state forest webpage. These events require a response in silvicultural activities that will often be highlighted in the annual work plan. For example, in the fiscal year 2014 work plan for Green Ridge State Forest, the annual work plan summary states:* *This work plan includes three silviculture proposals for a total of 281 managed*

	acres within the 24,414 acre general management zone in which area based sustainable forest management is practiced. Within these managed acres, end of rotation harvests are proposed to regenerate the stands while salvaging ice damaged forest resources. These harvests are proposed due to near total mortality of the overstory trees that resulted from a catastrophic hail storm event. There will be some variation between managed acres and actual harvest acres to provide for various buffers and/or retention areas. *On 27 May 2011 a major storm event producing very large hail impacted stands in the Mertens Avenue/Oldtown Road intersection area of the forest causing significant canopy loss. One year later the damage was evaluated and we learned that significant mortality occurred in approximately 400 acres of mature oak stands. The silviculture proposals in this work plan are the result of responding to this mortality. These proposals will focus on regenerating these stands while salvaging the timber loss. Once these salvage proposals are approved, they will be moved ahead to be accomplished during the FY-2013 operation cycle to salvage the timber while it is still merchantable. In return, an equivalent number of proposals approved in the FY-2013 AWP will be held for the FY-2014 operation cycle.* *The silviculture proposals within this plan include 281 acres of variable retention harvests for an estimated 1,090 mbf of hardwood timber.* **Indicator 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. ***FMU Response:*** *Each state forest maintains a Silvicultural Activity Summary By Annual Work Plan that is available on the relevant state forest webpages. Also, each Sustainable Forest Management Plan has included an explanation of the annual growth calculations.* **Indicator 8.2.c** The forest owner or manager periodically obtains data needed to monitor presence on the FMU of: 1) Rare, threatened and endangered species and/or their ***habitats***; 2) Common and rare plant communities and/or habitat; 3) Location, presence and abundance of invasive species; 4) Condition of protected areas, set-asides and buffer zones; 5) High Conservation Value Forests (see Criterion 9.4). ***FMU Response:*** *As possible, respecting the security issues of protected species and habitats as guided by the Maryland Natural Heritage Program, the results of this data are covered in each of the Sustainable Forest Management Plans. More recent and specific research and inventories can be found under the Monitoring section on each of the state forest webpages. The HCVF is documented and outlined in the Sustainable Forest Management Plan for each of the state forests (available online).*

	Indicator 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. ***FMU Response:*** *Operations monitoring is performed by our internal audit. This team includes the Regional Supervisor and Environmental Specialist which receives a list of all silvicultural activities that have been completed within the last year or are currently on going, and either visits each of these sites or a randomly selected subset. The sites are walked, discussed and examined based on established criteria such as how the annual work plan proposal was implemented and how well the operations was conducted considering sensitive areas, unique cultural or geologic resources, forest retention, aesthetic and recreation considerations, water quality, forest health and regeneration, forest roads, and community relations.* *The internal audits sheets are made available to the certification audit body and are available to the public for free or at a nominal price upon request.* **Indicator 8.2.d.2** A monitoring program is in place to assess the condition and environmental impacts of the forest-road system. ***FMU Response:*** *A forest roads inventory has been completed and is maintained in a GIS database for each of the state forests. The Forest Roads Management for Forest Operations on Maryland State Forests established the protocol in how this data would be collected and maintained. This system not only identifies the road structures such as culverts and bridges but also road segments, dimensions and condition. This system was used to create a priority list of culverts and roads to receive maintenance funding.* *The inventory protocol or an analysis of the results is available to the public for free or at a nominal price upon request.* **Indicator 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). ***FMU Response:*** *The DNR Forest Service three-step review process involves an Inter-Disciplinary Team of natural resource professions including: forestry, wildlife, natural heritage, fisheries, parks, and water resources. This team reviews each of the annual work plans and performs local site visits for proposals that may have a proximity to sensitive habitats or species. The second level of review involves a Citizens Advisory Committee comprised of an eleven-person team representing a wide arrangement of natural resource interests. These team members are local and knowledgeable in the resource interests they represent, such as recreation, hunting, fishing, forest industry, and special habitats. There purpose is to*

	communicate the pulse of the resource issues and concerns they represent. The third level of review is a 30-day public review of each of the state forest annual work plans. *The comments from each of these three groups then become part of the work plan document itself which is available online.* **Indicator 8.2.d.4** Stakeholder responses to management activities are monitored and recorded as necessary. ***FMU Response:*** *See Indicator 8.2.d.3 FMU Response above.* **Indicator 8.2.d.5** Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3). ***FMU Response:*** There are no federally recognized tribes in Maryland. **Indicator 8.2.e** The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency. ***FMU Response:*** *Each of the state forest annual work plans includes a budget section that outlines expected incomes and expenditures for the forest.* MD DNR have created a new "Monitoring" info block on the right sidebar for each of the state forests. We wanted to get this info collected and up ASAP, but soon will begin work with our webmaster to consolidate the monitoring references to a single webpage for ease of maintenance and access, with references to the appropriate state forests. Webpages updated: Potomac Garrett State Forest :: http://dnr.maryland.gov/publiclands/western/garrettforest.asp / http://dnr.maryland.gov/publiclands/western/potomacforest.asp Savage River State Forest :: http://dnr.maryland.gov/publiclands/western/savageriverforest.asp Green Ridge State Forest :: http://dnr.maryland.gov/publiclands/western/greenridgeforest.asp Pocomoke State Forest :: http://dnr.maryland.gov/publiclands/eastern/pocomokeforest.asp Chesapeake Forest :: http://dnr.maryland.gov/forests/chesapeakeforestlands.asp
SCS review	MD DNR's response provides a summary of how monitoring results are currently available in AWPs or SFMPs on the website or how monitoring results are made available upon request. Those that can be made available upon request were shown to the SCS audit team as evidence for Principle 6 and Criterion 8.2. The

	websites now present the most up-to-date monitoring results as confirmed on April 29, 2014. MD DNR's current actions are sufficient to warrant closure of this Major CAR. While there are no federally recognized tribes in Maryland, MD DNR has reached out to representatives of indigenous people of the state. No comments from tribal representatives have been received by MD DNR or SCS related to sites of cultural significance on the certified FMU. In addition for 8.2.e, MD DNR is also subject to internal audits and external legislative audits to ensure that funds are received and appropriated according to applicable laws and regulations. This information is public. Tracking the summary of monitoring results and updates to the same will be done via MD DNR's master checklist of certification requirements. Future audits will focus on updates and completeness of the information presented.
Status of CAR:	☒ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2014.15
Select one: ☐ **Major CAR** ☒ **Minor CAR** ☐ **Observation**	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	☐ Pre-condition to certification ☐ 3 months from Issuance of Final Report ☒ Next audit (surveillance or re-evaluation) ☐ Other deadline (specify):
FSC Indicator:	FSC-STD-50-001 V1-2, indicator 6.1 (see also COC for FMEs, part 3)
Non-Conformity (*or justification*): Website does not include the full promotional panel. Management documents that are linked to the website and observed in hard copy include FSC trademarks that are not in conformance with the most recent version of the trademark standard. The FME requested permission to used trademarks in 2009 and 2011 and the website and management documents were in conformance to the previous trademark standard.	
Corrective Action Request (*or Observation*): Catalogues, brochures, and websites shall include the promotional panel or its elements in a prominent place. A link or text such as "Look for FSC certified products" is included next to the panel, where the products are not all on the same page. FSC certified products are indicated by using the logo or with "FSC certified" in the product description.	
FME response *(including any evidence submitted)*	
SCS review	

Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

5. Certification Decision

Certification Recommendation	
FME be awarded FSC certification as a "Well-Managed Forest" subject to the minor corrective action requests stated in Section 4.2.	**Yes** ☒ **No** ☐
The SCS evaluation team makes the above recommendation for certification based on the full and proper execution of the SCS Forest Conservation Program evaluation protocols. If certification is recommended, the FME has satisfactorily demonstrated the following without exception:	
FME has addressed any Major CAR(s) assigned during the evaluation.	**Yes** ☒ **No** ☐
FME has demonstrated that their system of management is capable of ensuring that all of the requirements of the applicable standards (see Section 1.6 of this report) are met over the forest area covered by the scope of the evaluation.	**Yes** ☒ **No** ☐
FME has demonstrated that the described system of management is being implemented consistently over the forest area covered by the scope of the certificate.	**Yes** ☒ **No** ☐
Comments:	

SECTION B – APPENDICES (CONFIDENTIAL)

Appendix 1 – Current and Projected Annual Harvest for Main Commercial Species

A summary is included in each SFMP and current harvest data is summarized in AWPs. These are all available at http://www.dnr.state.md.us/forests/mdforests.asp.

Appendix 2 – List of FMUs Selected for Evaluation

[X] FME consists of a single FMU

[ ] FME consists of multiple FMUs or is a Group

Appendix 3 – List of Stakeholders Consulted

List of FME Staff Consulted

Name	Title	Contact Information	Consultation method
Brett Coakey	DNR, Fisheries		Meeting, field
Jack Perdue	DNR, Forest Service		Meeting, field
Steve Koehn	DNR, Forest Service		Meeting, field
Anne Hairston-Strang	DNR, Watershed		Meeting, field
Patrick Granes	DNR, RAS		Meeting, field
Kip Powers	DNR, Forest Service		Meeting, field
Sgt. Stephen Payne	DNR, NRP		Meeting, field
Kenneth Jolly	DNR		Meeting, field
Don Kronner	DNR-FS		Meeting, field
John F Wilson	DNR		Meeting, field
Alexander Clark	DNR-FS		Meeting, field
Mike Schofield	DNR		Meeting, field
Kenneth Jolly	DNR-FS		Meeting, field
George Eberling	DNR-FS		Meeting, field
Dan Feller	DNR WHS		Meeting, field
Steve Carr	DNR LAP		Meeting, field
Noah Rawe	DNR- PGSF		Meeting, field
Jason Savage	DNR- PGSF		Meeting, field
Bo Sliger	DNR- PGSF		Meeting, field
John Denning	DNR- PGSF		Meeting, field

List of other Stakeholders Consulted

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.

David Ray	The Nature Conservancy (TNC)	d_ray@TNC.ORG	Field and email	Yes
Joan Maloof, Ph.D.	Founder and Director of the Old-Growth Forest Network	jemaloof@salisbury.edu; 410-251-1800	Phone and email	Yes
Anonymous migrant workers			Field	No
Doug Cessna	Cessna Logging		Field	No
Beth Hill	Dorchester Lumber Company	dorchesterlumber@yahoo.com	Field	No
Skip Jones	Parker Forestry	skipjones@parkerforestservices.com	Field, meeting	Yes
Stacey Esham	Parker Forestry		Field, meeting	No
Tony DiPaolo	Glatfelter	Anthony-dipaolo@glatfelter.com		No
Kenney Pusey	Paul Jones	Kjp4410@aol.com	Field, meeting	No
Mary Pines	Equestrian user	410.726.8300		
Deborah Landau	TNC		Field, meeting	

Appendix 4 – Additional Evaluation Techniques Employed

No additional techniques were employed.

Appendix 5 – Certification Standard Conformance Table

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

REQUIREMENT	C/NC	COMMENT/CAR
P1 Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.		
C1.1 Forest management shall respect all national and local laws and administrative requirements.	C	
1.1.a. ***Forest*** management plans and operations demonstrate compliance with all applicable federal, state, county, municipal, and tribal laws, and ***administrative requirements*** (e.g., regulations). Violations, outstanding complaints or investigations are provided to the ***Certifying Body*** (CB) during the annual audit.	C	MD DNR has a legal department, which verifies all contracts and land acquisitions. Timber sales must be approved by the Board of Public Works. There are several other departments and external agencies that evaluate MD DNR for compliance to environmental, legal, and labor requirements. Forest managers also demonstrate knowledge of applicable laws and regulations, which they must take into account when preparing management plans. MD DNR reported no new violations or complaints for 2014. Interviews with a variety of foresters, Natural Heritage biologists and Natural Resource Police and review of forest management plans and observations of management operations described elsewhere in this report confirm that this FME meets the requirements of laws and regulations including for example those

		related to the protection of rare species, implementation of BMPs and SMZs. During this 2014 re-certification audit, management plan review, observations and interviews for example at D14. Indiantown Complex, S27, 28, 29 confirm compliance with the primary State law that governs the listing of endangered species, the Nongame and Endangered Species Conservation Act (Annotated Code of Maryland 10-2A-01) and the associated regulations (Code of Maryland Regulations 08.03.08).
1.1.b. To facilitate legal compliance, the ***forest owner*** or ***manager*** ensures that employees and contractors, commensurate with their responsibilities, are duly informed about applicable laws and regulations.	C	MD DNR employees interviewed demonstrated working knowledge of applicable laws, and are provided access to training certifications to cover legal requirements (e.g., certified pesticide applicator, CDL). Logging contractors interviewed were Licensed Forest Products Operators/ Master Loggers. Contracts also make reference to applicable laws and regulations. Foresters inspect and supervise management activities and ensure that operations comply with laws, regulations and BMPs. For example, foresters continue to require by contract that timber harvest operators meet OSHA and other logging safety requirements. Interviews with employees and timber harvest operators; these Master Loggers receive continuing education associated with laws and regulations. Review of training records for PGSF and SRSF confirms that employees and contractors received training and understand laws and regulations that apply to forest management activities including for example chemical use, best management practices and rare species protection.
C1.2. All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.	C	
1.2.a. The forest owner or manager provides written evidence that all applicable and legally prescribed fees, royalties, taxes and other charges are being paid in a timely manner. If payment is beyond the control of the landowner or manager, then there is evidence that every attempt at payment was made.	C	Parker Forestry communicated in an interview with the audit team that MD DNR makes its payments and reimbursements in a timely manner (once per month). See also: Fiscal Service Appropriation System (Green Sheet). Letters written annually to Counties of FMUs identifying monies to be paid in lieu of taxes for FY2013 were demonstrated for all Counties that receive payments. Payments are also listed w/in Annual Work Plan budget. Statement w/in CF SFMP 12.4, page 117 re: County tax & tax ditch payments. MD DNR staff are able to provide details on MD DNR's Forest Service payments and financial status (see Shanika Allen/DNR Forest Service Accounting; and Jack Perdue, MFS Certification Coordinator).
C1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	C	
1.3.a. Forest management plans and operations comply with relevant provisions of all applicable binding	C	Ginseng, which is not allowed to be harvested on MD DNR lands, is regulated by the Maryland Department

international agreements.		of Agriculture to comply with CITES. Interviews with Management confirm the absence of known violations or legal challenges; the absence of known violations has been believed to be evidence in the past of conformance with this section of the standard. FME's management plans and supporting documents are based on state laws and regulations, many of which were ratified to comply with federal laws that require compliance to international treaties. For example, the Endangered Species Act is relevant to the Convention on Biological Diversity. However, the FME has not conducted an analysis of international binding agreements to determine applicability. **See OBS 2014.1**
C1.4. Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.	C	
1.4.a. Situations in which compliance with laws or regulations conflicts with compliance with FSC Principles, Criteria or Indicators are documented and referred to the CB.	C	Certain chemical use which is allowed within US law but denied use by FSC has been an issue once, but was reported in the pesticide use report. Use has since been eliminated as an option. No other potential conflicts were reported.
C1.5. 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 ***Forest Management Unit*** (FMU).	C	MD DNR has a department of Natural Resources Police (NRP) that regularly patrol state lands to prevent and detect unauthorized activities. In addition, MD DNR 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	MD DNR'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. MD DNR staff regularly clean up dump sites to avoid attraction.
C1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.	C	
1.6.a. The forest owner or manager demonstrates a long-term commitment to adhere to the FSC Principles and Criteria and FSC and FSC-US policies, including the FSC-US Land Sales Policy, and has a publicly available statement of commitment to manage the FMU in conformance with FSC standards and policies.	NC	MD DNR has been certified since 2003 and has expanded the scope of their certificate. In 2014, the Maryland legislature passed a law requiring the State Forest system to maintain compliance to the FSC and SFI standards. See **Minor CAR 2014.2.**
1.6.b. If the certificate holder does not certify their entire holdings, then they document, in brief, the reasons for seeking partial certification referencing FSC-POL-20-002 (or subsequent policy revisions), the location of other managed forest units, the natural resources found on the holdings being excluded from certification, and the management activities planned for the holdings being excluded from certification.	C	See Section A of 2014 recertification report (or section 7/8 of annual audit reports) for a list of all lands outside of the scope of the certificate.
1.6.c. The forest owner or manager notifies the Certifying Body of significant changes in ownership and/or significant changes in management planning within 90 days of such change.	C	See **OBS 2014.3**

P2 Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.		
C2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.	C	
2.1.a. The forest owner or manager provides clear evidence of ***long-term*** rights to use and manage the FMU for the purposes described in the management plan.	C	See Tax Maps and Deed Descriptions via MDLandRec.net (Digital Image Retrieval System for the lands of MD). Copies of deeds are maintained at each State Forest Office. Jean Lipphard, Land Acquisition & Planning (LAP) / Annapolis, has originals. A sample of deeds was shown for the Chesapeake State Forest.
2.1.b. The forest owner or manager identifies and documents legally established use and access rights associated with the FMU that are held by other parties.	C	MD DNR legal department (Office of the Attorney General) maintains records of use and access rights, such as deeded rights-of-way. LAP maintains original documents.
2.1.c. Boundaries of land ownership and use rights are clearly identified on the ground and on maps prior to commencing management activities in the vicinity of the boundaries.	C	Boundaries painted but ROW and easements are not painted, but in general FME has internal roads mapped. All property boundaries observed on the Eastern and Western State Forests were clearly signed and/or painted. These are also visible on maps.
C2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies. *Applicability Note: For the planning and management of publicly owned forests, the local community is defined as all residents and property owners of the relevant jurisdiction.*	C	
2.2.a. The forest owner or manager allows the exercise of ***tenure*** and ***use rights*** allowable by law or regulation.	C	See evidence presented in C2.1. While few user groups provided comments in 2014, tree stands in the Chesapeake State Forest on hunt-lease lands were observed in the field and in compliance to lease requirements (i.e., not permanently affixed to trees). All other State Forests allow public hunting and other use rights, such as plant collection, via a permit system.
2.2.b. In FMUs where tenure or use rights held by others exist, the forest owner or manager consults with groups that hold such rights so that management activities do not significantly impact the uses or benefits of such rights.	C	See evidence presented in C2.1. Per hunt lease requirements on Chesapeake, MD DNR maintains communications over timber sales as timber harvests are used to promote wildlife habitat.
C2.3. Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.	C	
2.3.a. If ***disputes*** arise regarding tenure claims or use rights then the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If these good-faith efforts fail, then federal, state, and/or local laws are employed to resolve such disputes.	C	Requested $10,000 in FY12 to conduct surveys to resolve most difficult cases. Contractual staff has been hired to reclaim unmarked boundaries. Management Staff/Land Acquisition & Planning Process: • Mgt. Staff attempts find/restore boundary • Negotiate with landowner

		• Further difficulties referred to LAP • Office of Attorney General
2.3.b. The forest owner or manager documents any significant disputes over tenure and use rights.	C	Document in Disputed Boundary files. This would be handled by the Office of the Attorney General.
P3 The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.		
C3.1. Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.	NA	There are no Federally recognized native American tribes in Maryland. However, with assistance from the Maryland Commission on Indian Affairs, we have been able to place several native American members on our Citizens Advisory Committee. There is no tribal forest management or ownership/ use rights on MD DNR lands.
3.1.a. Tribal forest management planning and implementation are carried out by authorized tribal representatives in accordance with tribal laws and customs and relevant federal laws.	NA	
3.1.b. The manager of a tribal forest secures, in writing, informed consent regarding forest management activities from the tribe or individual forest owner prior to commencement of those activities.	NA	
C3.2. 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	
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	There are no tribal forest management or ownership/ use rights on MD DNR 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. Routine communication with Chief's re: management activities and public posting of AWP's on the forest web site.
C3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.	NA	
3.3.a. The forest owner or manager invites consultation with tribal representatives in identifying sites of current or traditional cultural, archeological, ecological, economic or religious significance.	NA	Tribes care most about the internment of remains recovered. Tribes are interested in State Park lands for this purpose, which are not in the scope of FSC certification. Tribal representatives did not respond to emails or phone calls during the 2014 audit. Management Staff will work with the Maryland Commission on Indian Affairs and the Maryland Historic Trust during the AWP preparation to ensure that any special sites are not harmed, should they ever be identified on the certified FMU.
3.3.b. In consultation with tribal representatives, the forest owner or manager develops measures to protect or enhance areas of special significance (see also Criterion 9.1).	NA	See 3.3.a.

C3.4. Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.	NA	No protected traditional knowledge is used for commercial or forest management purposes.
3.4.a. The forest owner or manager identifies whether ***traditional knowledge*** in forest management is being used.	NA	
3.4.bWhen traditional knowledge is used, written protocols are jointly developed prior to such use and signed by local tribes or tribal members to protect and fairly compensate them for such use.	NA	
3.4.c. The forest owner or manager respects the confidentiality of tribal traditional knowledge and assists in the protection of such knowledge.	NA	
P4 Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.		
C4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.	C	
4.1.a. Employee compensation and hiring practices meet or exceed the prevailing ***local*** norms within the forestry industry.	C	Short-term and long-term DNR contractors are not employees of MD DNR. MD DNR employees typically are salaried with benefits such as healthcare and retirement (pension or similar programs). Employees have not reviewed compensation practices for several years. See also 4.1.c.
4.1.b. Forest work is offered in ways that create high quality job opportunities for employees.	C	MD DNR leadership has been attempting to develop a career ladder for employees to avoid losing employees to private industry or other public agencies. Short-term and long-term DNR contractors are not employees of MD DNR.
4.1.c. Forest workers are provided with fair wages.	C	For the Eastern Region, Parker Forestry prepares three types of harvest contracts (Lump-sum, Stumpage, and Gatewood) that each contain line items on the Fair Labor Standards Act of 1938 (which covers minimum wage, overtime pay, recordkeeping, child labor provisions, and other topics). http://www.law.cornell.edu/uscode/text/29/chapter-8 The State of Maryland Human Resources (HR) department determines compensation scales for all State employees. HR maintains adherence to federal and state laws governing compensation, including salary determination (e.g., LSA of 1938).
4.1.d. Hiring practices and conditions of employment are non-discriminatory and follow applicable federal, state and local regulations.	C	For the Eastern Region, Parker Forestry prepares three types of harvest contracts (Lump-sum, Stumpage, and Gatewood) that each contain a line item on non-discrimination/ equal opportunity polices that contractors must adhere to as a contractual requirement. For all Maryland: State of Maryland is an equal opportunity employer. The legal department reviews and recommends content for all contract templates to ensure compliance to legal requirements on non-discrimination/ EO (Item 11 in large sale contracts).

		Viewed SR-02-11 and SR-09-13 for contract contents.
4.1.e. The forest owner or manager provides work opportunities to qualified local applicants and seeks opportunities for purchasing local goods and services of equal price and quality.	C	Qualified forest harvest contractors are petitioned to bid on local timber harvest operations. Operators must have a Forest Products Operators license and maintain Maryland Master Logger status. The State of Maryland maintains contracts for general services, such as office supplies, some of which are local. State Forests have the right to procure needed items locally if the state does not have a contract. Certain items are also procured through federal surplus, which is considered local to Maryland.
4.1.f. Commensurate with the size and scale of operation, the forest owner or manager provides and/or supports learning opportunities to improve public understanding of forests and forest management.	C	Forest Service employees are active in outreach programs regarding forestry. MD DNR website includes reference to several educational programs on wildlife, forestry, and the outdoors. Signs were observed at Savage River for a Native Plant Festival to occur in May 2014. Educational signs are also present in the field or at field offices for public viewing. Potomac-Garret State Forest has a demonstration forest (Cradle of Forestry).
4.1.g. The forest owner or manager participates in local economic development and/or civic activities, based on scale of operation and where such opportunities are available.	C	See 4.1.f for education, which is a civic activity. There is a camp for high school students interested in natural resource careers. There are two juvenile detention centers that abut state forests in Western Maryland that are occasionally provided work on state forests. Forest managers work with local economic development offices, many of which were interested in marketing certified forest products. This is an ongoing relationship in Western Maryland. Eastern Maryland maintains communication with sawmills on the Delmarva peninsula regarding supply and quality. Maryland state forests operated during the entire downturn, which allowed several mills and operators to stay in business.
C4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.	C	
4.2.a. The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).	C	In interviews with loggers and state contractors/ employees, these workers demonstrated knowledge of safety requirements and had required licenses or certificates to demonstrate that they can safely implement planned management activities. Safety laws are referenced in training for licensing/ certification and in MD DNR's relevant management planning policies and procedures. Timber operation plan reviews occur prior to all timber sales, in which contractor qualifications are reviewed. Migrant workers interviewed stated that they were working under H-2B visas. These workers travel around the country planting trees in several states for 6-12 months at a time before returning to their home countries.
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.	NC	Observations on active logging sites in the Western Region showed that equipment was in good condition and was being used appropriately. No active operations were taking place in the Eastern Region.

		For the Eastern Region, Parker Forestry prepares three types of harvest contracts (Lump-sum, Stumpage, and Gatewood) that each contain line items that explicitly require adherence to Federal, State, and Local health & safety laws. There are other line items that contain clauses about insurance, fire safety, accident prevention, and Master Logger/ Licensed Forest Product Operators (which require safety training). For all Maryland: The legal department reviews and recommends content for all contract templates to ensure compliance to legal requirements safety. Items 15 cover the requirement specifically in large sale contracts, though items 16 and 19 are also relevant. Viewed SR-02-11 and SR-09-13 for contract contents. See **Minor CAR 2014.4.** See **OBS 2014.5.**
4.2.c. The forest owner or manager hires well-qualified service providers to safely implement the management plan.	C	Attachment D of timber sale contract stipulates the Logger must be a Master Logger. This clause is added to this attachment as sales are proposed. See 4.2.b for contract clauses. All loggers interviewed were licensed and had active First AID/CPR certifications. www.md-demasterlogger.com CF SFMP 5.13, page 61-62
C4.3 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).	C	
4.3.a. Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.	C	ILO Convention 87 applies to both public and private organizations, while Convention 98 is inapplicable to government organizations. MD DNR employees that fall under a certain classification can be unionized per state legislation. In Maryland, there are approximately 30,000 unionized state workers (Source: MD Department of Budget and Management).
4.3.b. The forest owner or manager has effective and culturally sensitive mechanisms to resolve disputes between workers and management.	C	MD DNR staff maintain an open-door policy. Otherwise, complaints may be filed with Human Resources that follow a standard procedure for resolution.
C4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.	C	
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: • 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,	NC	The Annual Work Plan and ID Team processes are robust examples of planning efforts that allow for consideration of social impacts. Evidence of conformance includes: • Sustainable Forest Management Plans include descriptions of archeological sites and sites of cultural, historical and community significance. An effective meeting between MD DNR management, SRSF staff and a concerned stakeholder was observed during for the 2014

subsistence, recreation and health; • Community economic opportunities; • Other people who may be affected by management operations. A summary is available to the CB.		audit program at SRSF in relation to a potential conflict between listed archeological sites and the location of new ORV trail. • Forest Management Plans include descriptions of public resources, including air, water and food (hunting, fishing and collecting); the potential social impacts of hunting fishing and collecting were specifically considered and described during interviews. A public informational meeting was held during the 2013 audit cycle after several articles appeared in the local paper regarding the proposed changes to the hunting program at CF/PSF. • Forest Management Plans include a description of aesthetics. Planning for harvests includes consideration of aesthetics; field foresters are responsible and are supported by ID Teams. The use of the roadside buffers and variable retention harvest prescriptions are examples of aesthetic considerations during the process of locating retention. Aesthetic considerations were incorporated for example into PGSF Compartment 32-Briar Ridge and GR-02-13 Oldtown Road Salvage and PGSF 34-3. Confirmed through document review that the Policy & Procedure Manual includes for example the following section on visual quality: "In laying out forest harvest and thinning operations, particular care will be given to the need for visual quality protection. This will include location and operations of landings, decks, roads, and other areas of concentrated activity. Visual buffers will be maintained along areas where required." The field forester applies visual buffers as needed and the buffer is illustrated on the harvest plan maps. The '*Forestry Aesthetics Guide: Image and Opportunity'* is the reference publication used by staff. • MD DNR's PR Procedures MFS and CAC Purpose Statement include community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health. In addition, a 2009 multi-stakeholder partnership including MD DNR representatives, engaged the public through the use of 5 listening sessions located across the state and culminating with the Forestry Summit. Key issues, strategies and recommendations for addressing these issues were developed. A key issue (Maintaining Viable Forests and a Viable Forest Industry in Maryland) included a strategy to inventory and manage State-owned forests as sustainable working

		forests. http://www.dnr.state.md.us/forests/pdfs/sas/ForestrySummitReport.pdf • Community economic opportunities are addressed in a variety of ways including the use of timber harvest contracts that vary in size and scale including for example two small harvest opportunities that were successfully contracted to an Amish farmer (SR-02-12) and to a Community Action Program for handicapped workers (PG-02-12). The use of NTFP collection permits are most often issued to local residents. • Others who may be affected by management are activities are incorporated into the process in the following ways: o Maryland Historical Trust is a member of the Interdisciplinary Team that reviews each Annual Work Plans and projects. Records of Annual Work Plan comments for each State Forest are solicited and considered. o The first draft of each management plan or Annual Work Plan is reviewed including field visits by DNR's internal interdisciplinary team members and each revision is reviewed by the Citizens Advisory Committee. The revised plan is posted on the web for a 30-day review period and a public announcement is distributed to each major news outlet in the state, Patch.com and other relevant blog sites. • Other proposed activities including for example ROW issues with neighboring landowners, ad hoc salvage harvests, road realignments, acid mine mitigation, easement requests, adventure sporting events, insect studies and building razing are submitted to MD DNR for review and approval by DNR staff and the Maryland Historical Trust (if the proposal includes historic or archaeological topics). A 2009 multi-stakeholder partnership including the MD DNR surveyed forestry leaders and other interested individuals and groups during 5 listening sessions state-wide and culminated with the Forestry Summit. Four key issues were identified. Strategies and recommendations for addressing these issues were developed. MD DNR's protocol for monitoring and incorporating social impact assessment into management decisions is effective and is based on review by the ID Team and

		Forest Advisory Committee as confirmed through review of the 2013-14 SRSF complaint log resolution sections. No summary of social impacts that covers the elements of indicator 4.4.a was made available. See **Minor CAR 2014.6**
4.4.b. The forest owner or manager seeks and considers input in management planning from people who would likely be affected by management activities.	C	The following procedure is similar for both annual work plan and management plan; however, the most frequently used means of seeking and considering input on an annual basis is the Public consultation process for AWP. The first draft is made by management staff, this is reviewed along with necessary field visits by DNR's internal interdisciplinary team, the revision is reviewed by the Citizen's Advisory Committee, and then it is put on the web for 30 day review period. A public announcement is distributed to every major news outlet in the State, plus Patch.com and several relevant blog sites.
4.4.c. People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action so that they may express concern.	C	See 4.4.b and 4.4.d.
4.4.d. For ***public forests,*** consultation shall include the following components: 4. Clearly defined and accessible methods for public participation are provided in both long and short-term planning processes, including harvest plans and operational plans; 5. 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; 6. An accessible and affordable appeals process to 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.	NC	See 4.4.b for a description of the AWP and SFMP process. Overall, MD DNR's Timber Operations Order (Tbr_Ops_Procedures_2013-601_v1.pdf) directs how this process is to be followed. While it does state that the AWP is to include the Public Comments, and does outline the review by the ID Team, it does not specifically state a 30-day public review is required. This should and will be added as soon as possible. In other words, it should be in there and is not. Also the western Maryland state forest Sustainable Forest Management Plans do all state that a 30-day public review process is required. SRSF pg 14, PGSF pg 16, GRSF pg 12. However the Chesapeake Forest/Pocomoke plan does not. That too will be remedied ASAP but the key action is to state this in our overarching policy doc Timber Operations Order. See **Minor CAR 2014.6.**
C4.5. Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.	C	
4.5.a. The forest owner or manager does not engage in negligent activities that cause damage to other people.	C	MD DNR has not reported any incidences of negligence that has led to damage to life or limb or property rights of other people. No stakeholder comments were received regarding this topic.
4.5.b. The forest owner or manager provides a known and accessible means for interested stakeholders to voice grievances and have them resolved. If significant disputes arise related to resolving grievances and/or providing fair compensation, the forest owner or manager follows	C	MD DNR has a policy available for receiving and attending to grievances or complaints (http://www.dnr.state.md.us/forests/SFMGrievancePolicy.pdf). The contact information is on the main page for the Forest Service

appropriate dispute resolution procedures. At a minimum, the forest owner or manager maintains open communications, responds to grievances in a timely manner, demonstrates ongoing good faith efforts to resolve the grievances, and maintains records of legal suites and claims.		(http://www.dnr.state.md.us/forests/mdforests.asp). Each SF office maintains a grievance log. Records were viewed for Savage River (see C8.2).
4.5.c. Fair compensation or reasonable mitigation is provided to local people, communities or adjacent landowners for substantiated damage or loss of income caused by the landowner or manager.	C	No cause for compensation or mitigation has been reported on the part of MD DNR or stakeholders. Any compensation or mitigation would be managed by the legal department.
P5 Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.		
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.	C	
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.	C	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. MD DNR has received more funding for its road program ($900,000) and has several open recreational trail programs.
5.1.b. Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.	C	In the short-term (2013-14), financial factors have improved and have allowed MD DNR to expand its road maintenance programs. MD DNR managers stated the budget is more 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.
C5.2. Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.	C	
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.	C	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 local mills. State Forests establish minimally acceptable bids so that in case of down markets, products are not being harvested at a loss to the state.
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	In the Eastern Region, there are opportunities for high grade lumber, chips, sawdust, 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.

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	Firewood contracts are frequently 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 business 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.
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	In the Eastern Region, equipment is selected (e.g., processors, feller-bunchers) that allows for greater utilization of the lower portion of sawlogs. In the Western Region, salvage harvests were conducted in due time as to capture the value of severely damaged trees. In all cases, logs are transported prior to any chances for rotting or other damage to occur.
5.3.b. Harvest practices are managed to protect residual trees and other forest resources, including: • 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.	C	In the Eastern Region, there was one seed-tree harvest in which residual stand damage was about 40%, but Parker Forestry employed practices on the next harvest units to correct this. No other significant damage for forest resources described in this indicator was detected in the 2014 audit. Rutting Guidelines For Forest Operations and Forest Stand Retention For Forest Operations on Maryland State Forests are in place and enforced.
C5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.	C	
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.	C	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. State Forest managers maintain knowledge of local markets for forest products. For example, some of them receive market reports (e.g., Hardwood Market Report).
5.4.b The forest owner or manager strives to diversify the economic use of the forest according to Indicator 5.4.a.	C	In response to recreational user groups, such as mountain bikers (Eastern) or ORV enthusiasts (Western), MD DNR has expanded or established trail network recently. These user groups are likely to use local businesses for lodging, food, fuel, and other needs.
C5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of	C	

forest services and resources such as watersheds and fisheries.		
5.5.a. In developing and implementing activities on the FMU, the forest owner or manager identifies, defines and implements appropriate measures for maintaining and/or enhancing forest services and resources that serve public values, including municipal watersheds, fisheries, carbon storage and sequestration, recreation and tourism.	C	See content of Sustainable Forest Management Plan, and AWP ID Team & CAC review process. The zoning system within each State Forest includes water management areas for water quality and fisheries. Certain timber harvests are conducted for game species (e.g. ruffed grouse). Recreation, watersheds, hunting, and fishing are addressed in the SFMP and AWPs. Carbon storage and sequestration are not explicitly addressed in the management plan, but longer rotations (Eastern Region) and establishment of protected areas (Western Region) are compatible with this. Additionally, each state forest's SFMP addresses likely scenarios for forest types and management responses to climate change. Actions implemented in the field are consistent with maintaining and enhancing all of the associated forest services discussed in the indicator.
5.5.b The forest owner or manager uses the information from Indicator 5.5.a to implement appropriate measures for maintaining and/or enhancing these services and resources.	C	See 5.5.a. Timber harvests have riparian and protected areas delineated prior to implementation; longer rotations are used on the Eastern shore; hydrological restoration in the Eastern region is compatible with water quality concerns and rising sea levels as the wetlands created absorb more water; etc.
C5.6. The rate of harvest of forest products shall not exceed levels which can be permanently sustained.	C	
5.6.a. In FMUs where products are being harvested, the landowner or manager calculates the sustained yield harvest level for each sustained yield planning unit, and provides clear rationale for determining the size and layout of the planning unit. The sustained yield harvest level calculation is documented in the Management Plan. The sustained yield harvest level calculation for each planning unit is based on: • 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. 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.	C	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 at this point in time. For example, the Green Ridge SFMP includes a description of the maximum number of acres that may be treated with variable retention harvests. 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.
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.	C	Each State Forest maintains an annual work plan summary to compare actual acres harvested versus projected (e.g., http://www.dnr.state.md.us/forests/download/awp_summary.pdf). Harvest levels on an area control basis remain well below what is allowed per the Woodstock

		model.
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.	C	MD DNR has been harvesting on overstocked stands of the Eastern Region using pre-commercial thinning and a two-entry thinning regime prior to final harvest. First-entry seed tree harvests are used in pond pine restoration in which the seed trees are not removed and are recruited for legacy trees. In the Western Region, shelterwood, thinning, clearcut, and variable retention are used for treating overstocked stands and controlling species composition to deal with gypsy moth outbreaks. AWP scouting done by the Forest Manager and Forester. Notes on future management activities, such as silvicultural treatments or TSI, are incorporated into the forest GIS.
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.	NA	No NTFPs are harvested in significant commercial operations. Hunt leases are used only on the Chesapeake State Forest. The meat acquired is not commercially sold and is not commercially significant.
P6 Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.		
C6.1. 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.	C	
6.1.a. Using the results of ***credible scientific analysis, best available information*** (including relevant databases), and local knowledge and experience, an assessment of conditions on the FMU is completed and includes: 1) Forest community types and development, size class and/or successional stages, and associated ***natural disturbance regimes***; 2) ***Rare, Threatened and Endangered (RTE) species*** and ***rare ecological communities*** (including plant communities); 3) Other habitats and species of management concern; 4) Water resources and associated riparian habitats and hydrologic functions; 5) ***Soil resources***; and 6) ***Historic conditions*** on the FMU related to forest community types and development, size class and/or successional stages, and a broad comparison of historic and current conditions.	C	These subject areas are addressed in the SFMPs and AWPs for each state forest or region. Specifically, each SFMP discusses current stand conditions and disturbance regimes that have led to current conditions. RTE species and communities are also addressed; however, MD DNR also uses recovery plans. Special habitats discussed in SFMPs include riparian corridors. Water and soil resources are discussed in detail in SFMPs. An overview of land use history that has shaped the landscapes of the Eastern and Western Regions is included in each SFMP.
6.1.b. Prior to commencing site-disturbing activities, the	C	The Annual Work Plans (AWPs) and the associated

forest owner or manager assesses and documents the potential short and long-term impacts of planned management activities on elements 1-5 listed in Criterion 6.1.a. The assessment must incorporate the ***best available information***, drawing from scientific literature and experts. The impact assessment will at minimum include identifying resources that may be impacted by management (e.g., streams, habitats of management concern, soil nutrients). Additional detail (i.e., detailed description or quantification of impacts) will vary depending on the uniqueness of the resource, potential risks, and steps that will be taken to avoid and minimize risks.		Citizen Advisory Committee (CAC) reviews serve as a document assessment of resources identified in 6.1.a and how these could be affected. In addition, the AWPs are subject to public review during which any citizen can make comments on how planned activities may affect resources of 6.1.a. MD DNR's assessments draw from experts on the CACs, scientific literature, and assessment methods carried out by qualified/trained MD DNR staff.
6.1.c. Using the findings of the impact assessment (Indicator 6.1.b), management approaches and field prescriptions are developed and implemented that: 1) avoid or minimize negative short-term and long-term impacts; and, 2) maintain and/or enhance the long-term ecological viability of the forest.	C	The AWPs include descriptions of prescriptions and measures to avoid or minimize negative impacts. Certain prescriptions, such as road and trail maintenance, are intended to ensure that damaged BMPs are repaired so that impacts to soil and water resources are mitigated. Harvest prescriptions are based on the reproductive ecology of the tree species on site and natural disturbance regimes.
6.1.d. On public lands, assessments developed in Indicator 6.1.a and management approaches developed in Indicator 6.1.c are made available to the public in draft form for review and comment prior to finalization. Final assessments are also made available.	C	SFMPs and AWPs are subject to public review in draft form prior to finalization as described in 4.4.d.
C 6.2. Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping, and collecting shall be controlled.	C	
6.2.a. If there is a likely presence of RTE species as identified in Indicator 6.1.a then either a field survey to verify the species' presence or absence is conducted prior to site-disturbing management activities, or management occurs with the assumption that potential RTE species are present. Surveys are conducted by biologists with the appropriate expertise in the species of interest and with appropriate qualifications to conduct the surveys. If a species is determined to be present, its location should be reported to the manager of the appropriate database.	C	Timber harvest operations on sites that include a potential RTE species are not implemented until a field check has been completed by Natural Heritage ecological staff. The MD DNR Natural Heritage Program maintains the database of RT&E species. Field foresters and specialists review special sites and provide field-based information to the MD DNR Natural Heritage Program. Field foresters located in eastern Maryland submit forms to report observations of RT&E species to Maryland Heritage. Each prescription for each management activity is based on an ID team procedure that includes an opportunity for the MD Natural Heritage staff to provide advice. Interviews with MD DNR Natural Heritage staff in association with D14-Indiantown Complex, S5, 6, 7, 9 and 10 and PGSF 34-3 confirm the effectiveness of this process.
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	C	RTE species are protected through a network of Ecologically Significant Areas (ESAs) located within each of the State Forests. ESAs are described in Chapter 4.3 and Chapter 7.2.1 of each property's management plan. For example the PGSF Sustainable Forest Management Plan names 33 sites and SRSF Sustainable Forest Management Plan describes 22

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.		sites. Sites containing rare plant and/or animal communities have been identified and are managed for their unique attributes. The MD DNR Wildlife & Heritage Service is involved in assuring that special sites are inventoried, marked and managed including database maintenance for each site. For example 2014 interviews with MD DNR Natural Heritage staff in association with D14-Indiantown Complex, S5, 6, 7, 9 and 10 and PGSF 34-3 confirm the effectiveness of this process. The number and extent of ESAs is evidence of a well-established RTE protection program. For example, PGSF has designated 6,442 acres in 34 ESA's and about 37% of the forest area. During recent years, MD DNR completed actions to protect RTE species from ORV impacts and rare plant collectors. The following conservation measures on MD DNR land are based on relevant science, guidelines and consultation with relevant, independent experts: - Damage to rare sand dune community resulted in the closure of the Chandler Tract ORV Trail - Damage to native brook trout in Poplar Lick Stream led to closure of the Poplar Lick trail. - On GRSF, MD DNR Natural Heritage is conducting a rare species study. New conservation zones have not yet been established. - American ginseng (*Panax quinquefolius*), an S2S3 and CITES listed species is now prohibited (by MD DNR policy) from collection on State Lands. MD DNR completed research and utilized available information and new information to protect this NTFP from depletion and more recently MD DNR initiated a program to monitor American ginseng harvest levels within the State Forests in the western region; the on-going 5-year inventory plots data provide detailed information on the presence of American ginseng. Based on an analysis of the status of this state listed plant and the determination that the collection of American ginseng appears to be the primary driver of population decline in Western Maryland where permits had been issued through the fall of 2012, MD DNR's Secretary developed a policy (Ginseng Harvest Prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands.
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.	C	See also findings for 6.2.b. The requirements of this section of the standard are primarily accomplished through the ID team process described in detail elsewhere in this report. Harvest operations and restoration projects are reviewed by Heritage members of the ID team. Restoration projects for specific sites are listed within each Annual Work Plan.

		Evidence of conformance: For example the Delmarva Fox Squirrel habitat protection and enhancement projects on the CSF and PSF (P02 Nazareth Church - Tract 6, S6, S8; P02 Nazareth Church - Tract 6, S6, S8; W08 Bacon Complex, S10) and Delmarva Bay Restoration projects (D14. Indiantown Complex, S27, 28, 29) and Red Spruce Recovery Projects (PGSF Piney Mt.: Compartment 45). In addition the previously permitted collection of ginseng on PGSF is now prohibited as of 4/2013 and the illegal collection/hunting of rattlesnakes occurred in the past on PGF and the MD DNR ID team proposed a seasonal road closure and a gate has been installed.
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	MD DNR relies primarily on the Natural Resource Police for control of hunting, fishing, trapping, collecting and other impacts to RT&E species. Interviews with MD DNR staff and several Natural Resource Police during this 2014 audit program confirm that an effective level of cooperation exists between these state agencies. In Western Maryland where permits for the harvest of American ginseng (*Panax quinquefolius)* were issued in the past (through the fall of 2012), MD DNR's Secretary developed a policy (Ginseng harvest prohibition on State Lands: March 2013) that prohibits the harvest of American ginseng from State Lands. It is clear that from interviews with MD DNR management and staff and several Natural Resource Police that these 2 agencies can provide reasonable control over the recently prohibited collection of American ginseng a vulnerable S2S3 and CITES specie as described previously in section 6.2.b. The plan for control began with a proactive step including the mailing of letters to known collectors in advance of the harvest/collection season. Interviews with MD DNR staff and several Natural Resource Police during this 2014 audit program confirm NRPs are patrolling known collection areas and that enforcement efforts seem to be effective. On PGSF, illegal collection/hunting of rattlesnakes occurred in the past and the MD DNR ID team proposed a seasonal road closure and a gate has been installed.
C6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.	C	
6.3.a.1. The forest owner or manager maintains, enhances, and/or restores under-represented ***successional*** stages in the FMU that would naturally occur on the types of sites found on the FMU. Where old growth of different community types that would naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance	C	Interviews with field foresters and MD DNR Natural Heritage staff and review of a management plans confirm that MD DNR staff are aware of the under-represented landscape level successional stages (early and late-seral) and have demonstrated substantial efforts to maintain, enhance and/or restore these communities. Evidence includes:

and/or restore old growth characteristics.		Eastern Forests • Old Growth Ecosystem Management Areas (OGEMA) & RSAs established • SFMP 3.2, page 39, Appendix J, Chapter 5 • 2008 Old Growth Policy • On CF/PSF the staff has set aside multiple stands (at various successional stages) in Old Growth Ecosystem Management Areas (OGEMA) allowing conservation and improvement of those stands. • Mixed pine stands on the PSF treated with prescribed fire then harvested while retaining pond pine, short leaf and/or pitch pine instead of loblolly pine including for example P02 Nazareth Church - Tract 6, S6, S8 and P02 Nazareth Church - Tract 6, S6, and S8. Western Forests • Old Growth and Old Growth Ecosystem Management Areas- Chapter 3.2 (P38) PGSF Management Plan. • Kirk Orchard- Early succession wildlife habitat focus-areas and 1 of 3 special habitat areas. Treatments observed during a previous audit program on Green Ridge State Forest. • Anthony's Ridge Special Wildlife Management Area (~900 acres) and 1 of 3 special habitat areas. Currently a 100-year old matrix. Treatments for special species designed to maximize habitat (e.g. Golden Winged Warbler) based on BMPs for these species and including for example 10-acre regeneration harvests with residual stems. This is a focal area for GWW in MD. Plan completed February 2013 with cooperation from multiple partners. Practices implemented and on schedule. • Salvage harvest on GRSF adjacent to but not within OGEMA that was also affected by storm damage (GR-02-13). • Approximate 50% of these western State Forests are not zoned for active management and are therefore developing old forest characteristics over time. • On PGSF the staff with cooperation and communication from TNC and MD DNR Natural Heritage is maintaining 4 acres of red spruce plantations and is managing and monitoring crop tree release work in other areas of under-represented native red spruce in effort to facilitate natural regeneration and spread of the native stand. In another area red spruce seedlings are planted in areas that have sparse red spruce overstory but lack red spruce regeneration (PGSF Piney Mt.: Compartment 45).
6.3.a.2. When a ***rare ecological community*** is present, modifications are made in both the management plan and its implementation in order to maintain, restore or enhance the viability of the community. Based on the vulnerability of the existing community, ***conservation zones*** and/or ***protected areas*** are established where warranted.	C	MD DNR demonstrates exceptional efforts to identify rare ecological communities for protection, management and/or restoration. For example, the Nassawango Pines Restoration project on the Chesapeake State Forest includes a 134-acre restoration project including the use of prescribed fire to simulate a crown fire in this area that has a 4-8 year fire regime.

		Within the GRSF management plan, critical habitats have been mapped for state listed or uncommon species, shale barrens communities, old growth and potential old growth, vernal pools and unique open habitats. Similarly, the Potomac Garrett State Forest management plan describes 33 ecologically significant areas as well as other state protected lands. SRSF's Russell Road Sale/SR-01-11 includes a 160-acre salvage operation resulting from a 2006-2007 Gypsy moth defoliation that was followed by ice damage. This salvage operation creates under-represented early successional habitat; the harvest operation will be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration. In an exceptional example of coordinated management, the prescribed fire will begin upslope of the salvage area in the nearly adjacent sand meadows/barren (RSA) and travel through most of this salvage area to a skid road/fire break lower on the slope and stopping before an old growth stand (HCVF). Prescribed fire minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community. This is an outstanding example of research and cooperation with Heritage, TNC and others for assistance with a fire prescription of this size.
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. 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). 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). 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). On American Indian lands, timber harvest may be	C	Type 1 and Type 2 old growth forests have been identified and protected as mapped in the State Forest management plans for each of the five state forests. Confirmed that old growth layers appear in the GIS layer for PSF, CSF, GRSF, PGSF and SRSF. Audit team verified staff familiarity with the Policy and Procedures Handbook, Appendix F *Management Guidelines for the Conservation and Protection of Old Growth Forests* and details contained in each State Forest management plan (Chapter 3). Auditors confirmed that the adjacent OGEMA stand was buffered and not harvested during the 2014 GR-02-13 salvage operation. Note that MD DNR's classification of old growth may include second growth areas that have been identified as important to the development of late-seral stands. Many of these areas may not meet the FSC definitions for Type 1 and Type 2, but support MD DNR's conformance to 6.3.a.1.

permitted in Type 1 and Type 2 old growth in recognition of their sovereignty and unique ownership. Timber harvest is permitted in situations where: 1. Old growth forests comprise a significant portion of the tribal ownership. 2. A history of forest stewardship by the tribe exists. 3. High Conservation Value Forest attributes are maintained. 4. Old-growth structures are maintained. 5. Conservation zones representative of old growth stands are established. 6. Landscape level considerations are addressed. 7. Rare species are protected.		
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.	C	MD DNR accomplishes this required section of the standard through a network of special management areas including: - Ecologically Significant Areas - Special Wildlife Habitat Areas (e.g., GRSF's Kirk Orchard and Anthony's Ridge Special Wildlife Management Areas) - Old Growth and Old Growth Ecological Management Areas - Wildlife Habitat Areas - Forest Interior Dwelling Bird habitat (FIDS) - Delmarva Fox Squirrel (DFS) habitat Evidence: A variety of State Forest management plans, GIS maps, field stops described elsewhere in this report. See section 2.1 (field tour).
6.3.c. Management maintains, enhances and/or restores the plant and wildlife habitat of ***Riparian Management Zones (RMZs)*** to provide: a) habitat for aquatic species that breed in surrounding uplands; b) habitat for predominantly terrestrial species that breed in adjacent ***aquatic habitats***; c) habitat for species that use riparian areas for feeding, cover, and travel; d) habitat for plant species associated with riparian areas; and, e) stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem.	C	Rivers, streams, lakes and other water bodies as defined by best management practices are mapped and marked in the field (using paint or flagging) prior to the implementation of timber harvest activities or other management practices as confirmed during the current field audit of sites described elsewhere in this report. a. For example, habitat for aquatic species that breed in surrounding uplands was specifically observed by the use of significant uncut island RMZs at GR-01-13, PGSF 17-D, PGSF 17-G. As confirmed through interviews and field observations, these resource areas are generally avoided and not crossed as a method of protecting this habitat feature. b. For example, habitat for terrestrial species that breed in adjacent aquatic habitats was specifically observed by the use of significant uncut island RMZs at GR-01-13, PGSF 17-D, PGSF 17-G and D14. Indiantown Complex, S5, 6, 7, 9 and 10. c. For example, habitat for species that use riparian areas for feeding cover and travel was specifically observed by the use of significant uncut areas at GR-01-13, PGSF 17-D, PGSF 17-G and D14. Indiantown Complex, S5, 6, 7, 9 and 10. d. For example, habitat for plant species associated with riparian areas was specifically observed by

		the use of significant uncut island RMZs at GR-01-13, PGSF 17-D, PGSF 17-G and D14. Indiantown Complex, S5, 6, 7, 9 and 10. e. For example, stream shading including the provision for input of wood and litter was specifically observed by the use of significant uncut island RMZs at GR-01-13, PGSF 17-D, PGSF 17-G and D14. Indiantown Complex, S5, 6, 7, 9 and 10.
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.	C	Within the eastern region, an abundance of loblolly pine exists and management practices (e.g., retain and release oaks) are designed to decrease the relative abundance of loblolly over time and increase the presence of other native species as confirmed through observations at D14. Indiantown Complex, S5, 6, 7, 9 and 10 and P02 Nazareth Church - Tract 6, S6, S8. Within the western region, the audit team observed instances of promoting early successional habitat at Kirk Orchard and Anthony's Ridge Special Wildlife Habitat Areas to benefit populations of species that are in decline and dependent on this habitat type. The use of SILVAH OAK within the western region's forests will also help to ensure maintenance/enhancement of forest composition that is native to these sites. The audit team confirmed that MD DNR field foresters have an exceptional understanding of SILVAH OAK. The successful retention of oak regeneration within some of the State Forests in the western region, where moderate to high deer populations and preferential browsing by deer may contribute to regeneration delays is a concern for MD DNR. Temporary deer fencing has been installed in some areas and was observed during the 2014 audit at PGSF 17-G and during a previous audit program at PGSF (Swallow Falls Road, Compartment 39A). The planned retention of less common species (yellow poplar and white pine) within the salvage at GR-02-13 is another excellent example of practices that are aimed at maintaining species composition.
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.	C	Within the western region natural regeneration prescriptions are most common however oak seedlings were planted to supplement natural regeneration within a pilot project area that included deer fencing; seedlings were from MD seed sources. In another example, staff successfully under planted native red spruce in consultation and cooperation with TNC within the buffer to the TNC Cranesville Swamp Natural Area (that may be the largest bog in MD). Seedlings were removed from the Monongahela under a TNC permit and planted by MD DNR staff and volunteers at PGSF Piney Mt.: Compartment 45. A recent restoration site on PFSF included some planting of native Shortleaf Pine; the seed originated from a site on PSF.
6.3.f. Management maintains, enhances, or restores	NC	MD DNR implemented its Conformance to this policy is

habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include: a) large live trees, live trees with decay or declining health, ***snags***, and well-distributed coarse down and dead woody material. ***Legacy trees*** where present are not harvested; and b) vertical and horizontal complexity. Trees selected for ***retention*** are generally representative of the dominant species found on the site.		monitored by DNR management staff during the Internal Silvicultural Audits (ISA). These audits are completed by the ID Team during each annual work plan review. The ISA team routinely includes the Regional Forester, Forest Manager & staff, Forest Resource Planning Program Manager and contractors. The audit team observed consistent implementation of MD DNR's retention policy including: a) For example P02 Nazareth Church - Tract 6, S6, S8 and D14-Indiantown Complex, S5,6,7,9,10 and PGSF 17-G and PGSF Kindness Demonstration Forest include large live trees, live trees with decay or declining health, snags and well-distributed woody material. Legacy trees where present are not harvested. In many cases in the eastern shore areas stands were bulldozed under the previous ownership and legacy trees are largely not present due to past practices although mature cherry, red oak, red maple and snags were observed in windrows and legacy pines were observed along roads and boundaries; and b) For example D14-Indiantown Complex, S5, 6 ,7, 9 and10 and PGSF 17-G and PGSF Kindness Demonstration Forest include both vertical and horizontal complexity. However, GR-02-13 (post-ice storm salvage harvest) and PGSF 34-3 (clearcut with variable retention) utilized even-aged silviculture and live trees on these sites were not retained in a manner consistent with the proportion and configuration of the natural disturbance regime. For example, live small diameter white oaks were designated for removal where crown competition was not yet a significant factor in the salvage area; and live oaks were not well-distributed spatially in the clearcut with variable retention (live oaks were retained only in islands). See **Minor CAR 2014.7** See also section 2.1 (field tour).
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. 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.	NC	*Forest Stand Retention For Forest Operations on Maryland State Forests* has been implemented as confirmed by on-site observations of completed even-aged regeneration treatments (D14-Indiantown Complex, S5,6,7,9,10 and PGSF 17-G and PGSF Kindness Demonstration Forest) including ample and varied green and dead trees being retained in both islands and dispersed retention. However, GR-02-13 (post-ice storm salvage harvest) and PGSF 34-3 (clearcut with variable retention) utilized even-aged silviculture and live trees on these sites were not retained in a manner consistent with the proportion and configuration of the natural disturbance regime. For example, live small diameter white oaks were designated for removal where crown competition was not yet a significant factor in the salvage area; and live oaks were not well-distributed spatially in the clearcut with variable retention (live oaks were retained only in

		islands). See **Minor CAR 2014.7** Within the western State Forests (Appalachia Region) observations include variable retention harvests and salvage operations on Potomac-Garrett State Forest, Savage River State Forest and Green Ridge State Forest and harvest openings > 10-acres include substantial amounts of retention although in 2 examples the retention does not strictly conform to the requirements of Appendix C as described in the paragraph above. Within the eastern shore State Forests (Southeast Region) even-aged silviculture including final stage of shelterwood (overstory removal) are restricted to previously established pine plantations that are being managed as natural stands and openings that are less than 40 acres in size (except in the case of restoration plans developed by in cooperation with the MD DNR Natural Heritage and which is based on best available science). See also section 2.1 (field tour). See Appendix C.
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: 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.	C	There are no limitations on opening size limits in the Southeastern regional indicators; however, there are suggested opening size limits (80 acres). The average clearcut size is 40 acres, but MD DNR has had openings that range from 120-160 acres in the case of restoration of wetland ecosystems where pine was planted or invaded after disturbance (e.g., Nassawango Pines Restoration Project). In these cases, wetland hydrology is often restored and pines are removed with the intent of restoring natural plant communities. As confirmed through interviews with biologists, MD DNR Heritage staff and plan review, the completed Nassawango Pines Restoration Project that involved a 158-acre final harvest is one example of a qualified plan that included minor departures from the opening size limits. While not technically required by the SE Regional Indicators for 6.3.g.1, this restoration project includes a qualified plan as described in items 1-5 of this section.
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: 1. a method to determine the extent of invasive species and the degree of threat to native species and ecosystems; 2. implementation of management practices that minimize the risk of invasive establishment, growth, and spread; 3. eradication or control of established invasive populations when feasible: and,	C	1. MD DNR recently implemented a state-wide Early Detection & Rapid Response Plan which includes the following excerpt: "*This plan is designed to provide timely identification and effective treatment of small (<1/4 Acre) outbreaks of invasive species on State Lands. The intent is to take a proactive approach for the protection of native community types in the forest*". MD DNR is in the last year of its 5-year forest inventory project and the presence of invasive plants is one of the features included in the forest inventory

4. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species.		(SILVAH Oak); invasive plants are also noted and monitored during routine project planning and timber sale inspection reports. Invasive treatment projects are documented in Annual Work Plans as observed for example in GRSF 2014, GRSF 2015-pages 39, 43, SRSF 2013, SRSF 2015-pages 31, 33). In addition, the 2011 MD legislature authorized the establishment of an Invasive Plant Advisory committee that develops and ranks invasive plants. Finally, MD DNR developed research projects in cooperation with the MD Wildlife and Heritage Service. One project includes GRSF and determined how often common invasive species occurred, describes regional patterns and concluded that levels of invasion are not as severe as documented levels in other parts of the state. Another project focuses on the presence of invasive plants in ESAs and includes a section of CSF as a study site. 2. MD DNR forestry staff in cooperation with MD DNR Natural Heritage Program develops exotic/invasive plant species Best Management Practices guidelines. In addition, research discussions with harvest operators regarding the practice of cleaning equipment before harvest machinery enters a State Forest harvest area has been initiated and has not met with resistance. The details of this practice are still being developed. MD DNR is reviewing 2 management practice programs that were developed elsewhere while considering adapting the practices to the MD DNR system. 3. For example, treatment and follow-up treatment on D03-Little Blackwater for the control of non-native invasive Callery pear (Pyrus calleryana) included the successful 2013 removal efforts completed within this open field and field edge and included Callery Pear and Canada thistle. Callery pear has re-appeared along the road and will be treated again in 2014. Email correspondence between MD DNR staff and volunteers from the Chesapeake and Coastal Service, Section Chief for Community-Based Restoration Program was presented and reviewed and confirms that this next phase is on track. In another example, treatment and follow-up of Garlic Mustard (*Alliaria petiolata*) Control Project - Wallman/Laurel Run and the Japanese Knotweed (*Polygonum cuspidatum*) Control project - Compartment 5 Backbone Mountain (both at Potomac Garrett State Forest) include ground spraying in designated areas, follow-up monitoring and re-treatment as necessary. In the example of the Wallman Invasive Species Control Project, Compartments 21-26, this is the 5th year of a 5-7 multi-year backpack application of Glyphosate to control Garlic Mustard with specific focus on roadsides and drainage areas with some work on slopes. While the treatments are considered to be

		reasonably effective, follow-up monitoring and treatment is conducted. One ID team member describes this need to "pick your battles" and this is a battle worth fighting due to the nearby weed-free ESA and HCVF communities. In another 2012 example on the SRSF, MD DNR staff demonstrated its ability to implement an early detection and rapid response in an impressive efforts to treat and prevent the spread of the newly discovered yellow archangel (*Lamiastrum galeobdolon*). This example confirms a high level of coordination among field ID teams, a proactive approach to invasive plant species control and an exceptional ability to quickly treat the area. 4. MD DNR Natural Heritage Program is responsible for most of the monitoring of control measures and the State Forests represent the major locations for their suppression projects. MD DNR is in the final stage of completing its 5-year forest inventory project and the presence of invasive plants is 1 of the features included in the forest inventory (SILVAH Oak); invasive plants are also noted and monitored during routine project planning and timber sale inspection reports. As one example of the many control projects reviewed during the 2014 re-certification audit, this is the 5th year of a 5-7 multi-year backpack application of Glyphosate within the Garlic Mustard Control Project - Wallman/Laurel Run, Potomac Garrett State Forest. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary and has been implemented. In another example, treatment and follow-up treatment on D03-Little Blackwater for the control of non-native invasive Callery pear (Pyrus calleryana) included the successful 2013 removal efforts completed within this open field and field edge and included Callery Pear and Canada thistle. Callery pear has re-appeared along the road and will be treated again in 2014. Email correspondence between MD DNR staff and volunteers from the Chesapeake and Coastal Service, Section Chief for Community-Based Restoration Program was presented and reviewed and confirms that this next phase is on track.
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.	C	Management in the form of fuel reduction occurs in conjunction with other objectives. In the recent past, the Nassawango Pines Restoration project on the Chesapeake State Forest included a 134-acre restoration project including the use of prescribed fire to simulate a crown fire in this area that has a 4-8 year fire regime. 1)In a more recent example, site preparation and ecological restoration projects like the SRSF's Russell Road Sale/SR-01-11 includes a 160-acre

		salvage prescription is the result of a 2006-2007 Gypsy moth defoliation that was followed by ice damage. This salvage operation is complete and will be followed by the use of prescribed fire as recommended by local experts to stimulate oak regeneration. An exceptional example of coordinated management, the prescribed fire will begin upslope of the salvage area in the nearly adjacent fire-adapted sand meadows/barren (RSA) and travel through most of this salvage area to a skid road/fire break lower on the slope and stopping before an old growth stand (HCVF). In this situation, the use of prescribed fire within this salvage operation minimizes risk of wild fire, implements a recommendation that may improve regeneration success of oak on this site and enhance the nearly adjacent rare sand meadows/barren community. This is an outstanding example of research and cooperation with Heritage, TNC and others for assistance with the planning and implementation of a prescribed fire of this size. MD Heritage staff specialists monitor sites that have a high potential for rare species for presence of target species following burn treatments. 2)In this situation, the use of prescribed fire within this salvage operation minimizes risk of wild fire in this stand that includes nearly 100% mortality, implements a recommendation that may improve regeneration success of oak on this site and enhances the rare sand meadows/barren community that is located upslope of the salvage area. 3)This 160-acre salvage prescription is the result of a 2006-2007 Gypsy moth defoliation that was followed by ice damage and yielded nearly 100% mortality of this stand including most of the regeneration. This prescription that includes the use of prescribed fire may improve the regeneration success of oak on this site and thus provide a future economic gain. 4)Procedures for establishing each prescription include evaluating each site for potential hazards (e.g. smoke, location of fire breaks) as described in the SRSF Management Plan (Chapter 10 p 117). This is an outstanding example of research and cooperation with Heritage, TNC and others for assistance with the implementation of a prescribed fire of this size and in consideration of public safety. 5)This is an outstanding example of research and cooperation with Heritage, TNC and others for assistance with the implementation of a prescribed fire of this size and for coordination of the development of a prescribed burn plan prepared by MD DNR fire staff based on *A Guide to Prescribed Fire in Southern Forests* (USDA 1989) and appropriate permits.
C6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural	C	

state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.		
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. 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.	C	The Representative Sample Area (RSA) exercise is complete as confirmed by GIS review, interviews and management plan review and review of "*Methodology for Locating Representative Sample Areas (RSA) for Naturally Occurring Ecosystems within the Region of Maryland State Forests".* 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.
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 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. Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.	C	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. 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).
6.4.c. Management activities within RSAs are limited to low impact activities compatible with the protected RSA objectives, except under the following circumstances: 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	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: 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.
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.	C	This indicator will be assessed by MD DNR in 2022 (i.e. 10 years after the completion of the original 2012 RSA assessment.
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.	C	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.
C6.5. Written guidelines shall be prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.	C	
6.5.a. The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.	C	BMP checklists are filled out prior to each planned management activity. SFMP and state storm water design manual serve as general guidelines. Certain state forests, such as those in the Western Region,

		have their own BMP manual adapted to regional conditions.
6.5.b. Forest operations meet or exceed Best Management Practices (BMPs) that address components of the Criterion where the operation takes place.	C	FORESTRY BEST MANAGEMENT PRACTICES IN MARYLAND: Implementation and Effectiveness for Protection of Water Resources http://www.na.fs.fed.us/watershed/pubs/bmp/09_md_bmp_report.pdf During an interview with the MD DNR's forest hydrologist, it was confirmed that another statewide BMP study is to occur soon.
6.5.c. Management activities including site preparation, harvest prescriptions, techniques, timing, and equipment are selected and used to protect soil and water resources and to avoid erosion, landslides, and significant soil disturbance. Logging and other activities that significantly increase the risk of landslides are excluded in areas where risk of landslides is high. The following actions are addressed: • Slash is concentrated only as much as necessary to achieve the goals of site preparation and the reduction of fuels to moderate or low levels of fire hazard. • Disturbance of topsoil is limited to the minimum necessary to achieve successful regeneration of species native to the site. • Rutting and compaction is minimized. • Soil erosion is not accelerated. • Burning is only done when consistent with natural disturbance regimes. • Natural ground cover disturbance is minimized to the extent necessary to achieve regeneration objectives. • Whole tree harvesting on any site over multiple rotations is only done when research indicates soil productivity will not be harmed. • Low impact equipment and technologies is used where appropriate.	C	MD DNR's BMP guidelines are implemented to protect soil and water resources during management activities. During site visits in 2014, for both the Western and Eastern Regions, slash was dispersed relatively evenly over harvest sites due to removal of tops immediately after felling. Options for slash control include use of slash to meet BMPs, crushing, natural decay, and prescribed fire. No excessive topsoil disturbance was observed on harvest sites visited. Areas of disturbed topsoil observed were not draining into water courses and are for the purposes of regeneration. Rutting in the Eastern Region was within established limits set by BMP standards and was limited to principal skid trails. No rutting was observed in the Western Region. BMPs were installed at harvest sites in both regions to control erosion. Whole tree harvesting is not currently in use. Lowest impact equipment is used when available and appropriate for site conditions. Loggers sometimes use slash during harvesting on skid trails or for temporary crossings it can significantly reduce negative impacts without sacrificing safety and efficiency.
6.5.d. The transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, maintained, and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects, while allowing for customary uses and use rights. This includes: • access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts; • road density is minimized; • erosion is minimized; • sediment discharge to streams is minimized; • there is free upstream and downstream passage for aquatic organisms; • impacts of transportation systems on wildlife	C	MD DNR inherited a legacy road system in the Eastern Region and in parts of the Western. In cooperation with the MD DNR hydrologist, roads may be identified for temporary or permanent closure during restoration projects. Access is controlled via gates on main roads. ORV trail access has been greatly reduced on forestlands. Skid trail and landing density is controlled through considerations of equipment and pre-harvest planning and consultation with operators. Erosion and sediment discharge are controlled through use of BMPs. MD DNR recently identified areas in need of repair (see response to OBS 2013.1). Bridges or culverts are used at crossings on larger streams so that aquatic organisms have free passage.

habitat and migration corridors are minimized; • area converted to roads, landings and skid trails is minimized; • habitat fragmentation is minimized; • unneeded roads are closed and rehabilitated.		Through controlling access to secondary roads and skid trails, MD DNR reduces impacts to wildlife passage and habitat. Edge-effects are reduced where not desired through planning skid trail layout.
6.5.e.1.In consultation with appropriate expertise, the forest owner or manager implements written ***Streamside Management Zone*** (SMZ) ***buffer*** management guidelines that are adequate for preventing environmental impact, and include protecting and restoring water quality, hydrologic conditions in rivers and stream corridors, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas. The guidelines include vegetative buffer widths and protection measures that are acceptable within those buffers. In the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.	NC	SMZ guidelines are provided in SFMPs for each state forest and actual SMZs are mapped in the GIS. MD DNR prepared the Western Maryland Erosion and Sediment Control Standards and Specifications for Forest Operations in 2011 that contains SMZ widths based on 50' + (4' * x%). For smaller slope %, such as those between the APP 1-10% and 11-20% category, minimum widths depart from the minimum widths required by FSC. For larger slope %, MD DNR SMZ widths exceed APP requirements. These SMZs are based on watershed studies and have been reviewed by the FME's hydrologist. See **Minor CAR 2014.8.**
6.5.e.2. Minor variations from the stated minimum SMZ widths and layout for specific stream segments, wetlands and other water bodies are permitted in limited circumstances, provided the forest owner or manager demonstrates that the alternative configuration maintains the overall extent of the buffers and provides equivalent or greater environmental protection than FSC-US regional requirements for those stream segments, water quality, and aquatic species, based on site-specific conditions and the best available information. The forest owner or manager develops a written set of supporting information including a description of the riparian habitats and species addressed in the alternative configuration. The CB must verify that the variations meet these requirements, based on the input of an independent expert in aquatic ecology or closely related field.	NC	See 6.5.e.1. Minor variations from the minimum widths are permitted as long as the provisions of indicator 6.5.e.2 are met. MD DNR has not sought a variance per these requirements. See **Minor CAR 2014.8.**
6.5.f. Stream and wetland crossings are avoided when possible. Unavoidable crossings are located and constructed to minimize impacts on water quality, hydrology, and fragmentation of ***aquatic habitat.*** Crossings do not impede the movement of aquatic species. Temporary crossings are restored to original hydrological conditions when operations are finished.	C	All crossings observed were installed according to specification and only when necessary to access areas for management and monitoring activities. Bridges or culverts are used for crossings. Appropriate sized culverts were observed, which did not impede aquatic organisms.
6.5.g. Recreation use on the FMU is managed to avoid negative impacts to soils, water, plants, wildlife and wildlife habitats.	C	Most ORV trails have been closed. Trail maintenance for other user groups such as mountain bikers and equestrian is accomplished through grants and volunteers of those groups interested in maintaining access. New ORV trails are in the works in the Western Region in cooperation with user groups and environmental stakeholders to ensure that impacts are controlled and reduced (see itinerary for more information).
6.5.h. Grazing by domesticated animals is controlled to protect in-stream habitats and water quality, the species composition and viability of the riparian vegetation, and the banks of the stream channel from erosion.	NA	No grazing is permitted on State Forests. No grazing by domesticated animals was detected during site visits or reported during stakeholder interviews.

C6.6. 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 and environmental risks.	C	
6.6.a. No products on the FSC list of Highly Hazardous Pesticides are used (see FSC-POL-30-001 EN FSC Pesticides policy 2005 and associated documents).	C	Chemical inventory and use records indicate the use of only approved chemicals.
6.6.b. All toxicants used to control pests and competing vegetation, including rodenticides, insecticides, herbicides, and fungicides are used only when and where non-chemical management practices are: a) not available; b) prohibitively expensive, taking into account overall environmental and social costs, risks and benefits; c) the only effective means for controlling invasive and exotic species; or d) result in less environmental damage than non-chemical alternatives (e.g., top soil disturbance, loss of soil litter and down wood debris). If chemicals are used, the forest owner or manager uses the least environmentally damaging formulation and application method practical. Written strategies are developed and implemented that justify the use of chemical pesticides. Whenever feasible, an eventual phase-out of chemical use is included in the strategy. The written strategy shall include an analysis of options for, and the effects of, various chemical and non-chemical pest control strategies, with the goal of reducing or eliminating chemical use.	NC	The SFMPs contain justification for chemical use in certain situations; however, not all situations are provided with explicit justification in written strategies. See **Minor CAR 2014.8.**
6.6.c. Chemicals and application methods are selected to minimize risk to non-target species and sites. When considering the choice between aerial and ground application, the forest owner or manager evaluates the comparative risk to non-target species and sites, the comparative risk of worker exposure, and the overall amount and type of chemicals required.	C	See SFMPs, which describe situation in which aerial application occurs and what precautions will be applied during application to protect sensitive sites and non-target species. Aerial applicators are highly trained, licensed, and enclosed in helicopters during applications. MD DNR staff apply glyphosate or imazypyr using the hack 'n' squirt method, which is among the most direct methods and lowest risk for worker exposure.
6.6.d. Whenever chemicals are used, a written prescription is prepared that describes the site-specific hazards and environmental risks, and the precautions that workers will employ to avoid or minimize those hazards and risks, and includes a map of the treatment area. Chemicals are applied only by workers who have received proper training in application methods and safety. They are made aware of the risks, wear proper safety equipment, and are trained to minimize environmental impacts on non-target species and sites.	NC	All MD DNR staff applicators are licensed applicators or are overseen by licensed applicators. Licensed applicators receive training on application methods and safety. Oftentimes chemicals are used that have little impact to non-target tree species. See **Minor CAR 2014.8.**
6.6.e. If chemicals are used, the effects are monitored and the results are used for adaptive management. Records are kept of pest occurrences, control measures, and incidences	C	Records of chemical use are maintained and are reported in the Section A of the FSC report. MD DNR workers that suffer a chemical exposure incident must

of worker exposure to chemicals.		fill out incident reports.
C6.7. 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.	C	
6.7.a. The forest owner or manager, and employees and contractors, have the equipment and training necessary to respond to hazardous spills	C	Loggers interviewed at active sites maintain equipment to avoid spills and leaks. Equipment to clean-up spills was present at active logging sites.
6.7.b. In the event of a hazardous material spill, the forest owner or manager immediately contains the material and engages qualified personnel to perform the appropriate removal and remediation, as required by applicable law and regulations.	C	While no recent spills were reported, MD DNR staff and contractors interviewed were knowledgeable of containment and clean-up procedures.
6.7.c. Hazardous materials and fuels are stored in leak-proof containers in designated storage areas, that are outside of riparian management zones and away from other ecological sensitive features, until they are used or transported to an approved off-site location for disposal. There is no evidence of persistent fluid leaks from equipment or of recent groundwater or surface water contamination.	C	At logging sites observed, all fuels were stored in leak-proof containers in designated upland areas (landings) away from sensitive features. No evidence of persistent leaks was observed in machinery or vehicles. All chemicals are disposed of offsite.
C6.8. 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.	C	
6.8.a. Use of ***biological control agents*** are used only as part of a pest management strategy for the control of invasive plants, ***pathogens***, insects, or other animals when other pest control methods are ineffective, or are expected to be ineffective. Such use is contingent upon peer-reviewed scientific evidence that the agents in question are non-invasive and are safe for native species.	C	In cooperation with MD Department of Agriculture this FME uses *Bacillus thuringiensis* (BT) for gypsy moth control. Because of its specificity, BT is considered to have little or no effect on humans, wildlife or pollinators as well as most other beneficial insects. A 2012 European regulatory peer review was conducted on 5 approved strains of BT. Since 1999, MDA has released three different species of predatory black lady beetle for control of hemlock wooly adelgid (*Adelges tsugae*) including *Sasajiscymnus tsugae*, *Laricobius nigrinus* and *Scymnus sinuanodulas*) totaling 49,358 beetles in 27 locations in Harford, Baltimore, Frederick, Washington, Allegany and Garrett counties. Of the three species released, *Laricobius nigrinus*, a beetle native to western North America feeds only on woolly adelgid. The adult beetles lay eggs on wintering hemlock woolly adelgid larvae; when larvae emerge, they feed on hemlock woolly adelgid. L. nigrinus beetles can only complete their development by feeding on hemlock woolly adelgid. L nigrinus has already been established at seven of the 10 release sites. The other three sites are the most recent release locations and population levels have not met the requirements to be considered established. MDA will continue to release this species and monitor populations. The other 2 beetle species did not recover after release and are no longer part of the bio-control release program. A new species, *Laricobious osakensis*, has been used for the first time, finally clearing USDA-APHIS after 10-years of review. This beetle was released on Savage

		River State Forest, at the Poplar Lick site in November 2013. Current biological controls in the Eastern Region include a weevil for mile-a-minute. This use is regulated by the Maryland Department of Agriculture (MDA) in cooperation with USDA APHIS and the State Highway Administration (SHA) under accepted scientific rearing, release and monitoring protocols. More information is available through MDA: http://mda.maryland.gov and http://sha.md.gov/Pages/release.aspx?newsId=1189.
6.8.b. If biological control agents are used, they are applied by trained workers using proper equipment.	C	Control agents are applied by trained MDA or SHA employees.
6.8.c. If biological control agents are used, their use shall be documented, monitored and strictly controlled in accordance with state and national laws and internationally accepted scientific protocols. A written plan will be developed and implemented justifying such use, describing the risks, specifying the precautions workers will employ to avoid or minimize such risks, and describing how potential impacts will be monitored.	C	The use of biological control agents is well-documented and monitored by USDA APHIS, and MDA. See the websites mentioned in 6.8.a for the written protocols. See also USDA APHIS' website, which references protocols for applying controls to several invasive pests, include mile-a-minute (e.g., http://www.aphis.usda.gov/plant_health/plant_pest_info/tcd/downloads/NationalResponseFramework.pdf). See also MDA's annual reports, which document the results of release and monitoring (e.g., http://mda.maryland.gov/Documents/MDA_2013AR_web.pdf).
6.8.d. Genetically Modified Organisms (GMOs) are not used for any purpose	C	Interviews and document review confirm that there is no use of GMOs by MD DNR. In the Eastern Region, seed sources come from the State nursery, which sources seed and vegetative material from the region.
C6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.	C	
6.9.a. The use of ***exotic species*** is contingent on the availability of credible scientific data indicating that any such species is non-invasive and its application does not pose a risk to native biodiversity.	C	No exotic species are used for commercial or management purposes in the Eastern region. In the Western Region, Norway Spruce and Red Pine exist in legacy plantations that are being managed on a trajectory for restoration of mixed native conifer and hardwood stands.
6.9.b. If exotic species are used, their provenance and the location of their use are documented, and their ecological effects are actively monitored.	C	The Norway Spruce and Red Pine plantations were established several decades ago. No offsite regeneration is occurring and plans have been developed to restore these areas to semi-natural management.
6.9.cThe forest owner or manager shall take timely action to curtail or significantly reduce any adverse impacts resulting from their use of exotic species	C	No adverse impacts have been detected from the exotic species mentioned in 6.9.a-b.
C6.10. 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.	NA	There has been no conversion of forest to non-forest land use in the Eastern Region. Old food plots are allowed to succeed naturally back to forest. In the Western Region, there have been no forest areas converted to non-forest use. Currently, no state forestland has been converted to exercise mineral rights.
6.10.a Forest *conversion* to non-forest land uses does not occur, except in circumstances where conversion entails a very limited portion of the forest management unit (note	NA	

that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).		
6.10.b Forest *conversion* to non-forest land uses does not occur on high conservation value forest areas (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).	NA	
6.10.c Forest *conversion* to non-forest land uses does not occur, except in circumstances where conversion will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).	NA	
6.10.d Natural or semi-natural stands are not converted to plantations. Degraded, semi-natural stands may be converted to restoration plantations.	NA	
6.10.e Justification for land-use and stand-type conversions is fully described in the long-term management plan, and meets the biodiversity conservation requirements of Criterion 6.3 (see also Criterion 7.1.l)	NA	
6.10.f Areas converted to *non-forest use* for facilities associated with subsurface mineral and gas rights transferred by prior owners, or other conversion outside the control of the certificate holder, are identified on maps. The forest owner or manager consults with the CB to determine if removal of these areas from the scope of the certificate is warranted. To the extent allowed by these transferred rights, the forest owner or manager exercises control over the location of surface disturbances in a manner that minimizes adverse environmental and social impacts. If the certificate holder at one point held these rights, and then sold them, then subsequent conversion of forest to non-forest use would be subject to Indicator 6.10.a-d.	NA	
P7 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.		
C7.1. 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.** **c) 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) 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.** **h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.** **i) Description and justification of harvesting techniques and equipment to be used.**	C	The general structure of the FMP is based on each state forest with the structure and content of the documents being based on the same templates. Each state forest within the scope of the FSC certificate has an overarching Sustainable Forest Management Plan (SFMP) and Annual Work Plans (AWP) prepared for management activities to occur in the upcoming fiscal year. Summaries of the AWPs are also prepared. Chesapeake and Pocomoke State Forests additionally have individual summaries for their SFMPs and other supporting documentation available online as they have been certified for longer periods of time. MD DNR also maintains a Policy Handbook and procedures for implementing certain components of the FMP.
7.1.a. The management plan identifies the ownership and legal status of the FMU and its resources, including rights	C	Each SFMP includes a section on the history of the state forest, along with an ownership history.

held by the owner and rights held by others.		Allowable public uses are described in the Chapter 9 of each SFMP. Each FMP contains tables and figures on land use within and surrounding state forests.
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).	C	Each SFMP includes a section on the history of the state forestlands. Chapters 2, 3 and 4 of each SFMP include a description of the current forest resource and guidelines on management based on natural disturbance regimes. Certain appendices may also cover special disturbance regimes, such as fire. The AWP includes a brief description of past land uses and management as an introduction for the basis of the planned management activities for the fiscal year.
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.	C	Chapters 2-8 of each SFMP (Resource Assessment, Resource Characterization, Land Management Area Guidelines, Forest Management, Water Quality, Ecologically Significant Areas, and Wildlife Habitat). Objectives are stated in various chapters; however, Chapter 5 includes management objectives of forest management/ silviculture. The AWP includes a description of the current conditions of resources and what will be done in the fiscal year to accomplish desired future conditions based on a given state forest's ecology or past management.
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.	C	See Chapters 2-8 of each SFMP (Resource Assessment, Resource Characterization, Land Management Area Guidelines, Forest Management, Water Quality, Ecologically Significant Areas, and Wildlife Habitat). The AWP provides a description in the summary. While a non-conformance is found in section 6.3.g.1 that is associated with management activities, it should be noted that the required information is found in each SFMP and AWP including in this case a description of retention.
7.1.e. The management plan includes a description of the following resources and outlines activities to conserve and/or protect: • 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.	C	Chapters 2-8 of each SFMP (Resource Assessment, Resource Characterization, Land Management Area Guidelines, Forest Management, Water Quality, Ecologically Significant Areas, and Wildlife Habitat). The AWP includes descriptions of activities planned to protect or enhance RTE species, plant communities (e.g.,, Atlantic white-cedar swamps), wildlife, water and soil resources (e.g., soil series appendix), RSAs, and HCVs. Other management areas are described depending on each state forest's resources (e.g., ORV trails).
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).	C	Chapters 3 and 5 of each SFMP include a section on invasive species based on FSC-US guidelines.
7.1.g. The management plan describes insects and diseases, current or anticipated outbreaks on forest conditions and management goals, and how insects and	C	Each SFMP treats insects and diseases in its Resource Assessment and Characterizations (Chapters 2 and 3), but mostly throughout the SFMPs and especially when

diseases will be managed (see Criteria 6.6 and 6.8).		dealing with fire.
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.	C	Herbicide use is described in Chapters 5, 6, 7 and 10 of the SFMP. Each of these Chapters describes basic use and restrictions near sensitive sites. Some SFMPs and AWPs describe some of the chemicals to be used (GRSF MP page 202 '…Ailanthus trees will be treated using basal bark applications of Garlon 4 20% or cut treatment of Vanquish (50%)…" and GRSF AWP page 39 "…Japanese barberry will be foliar sprayed with Garlon 3-A…"). The former prescription is specific to Kirk Orchard and the latter is specific to stands located within Shale Barren Communities; however, other chemical prescriptions are not specific as required by this section of the standard. CF-PSF AWP (page 60) includes a prescription for chemical use and does not include all details required by this section of the standard. This FME has a nonconformance to some indicators of C6.6 its chemical use strategy may change as a result of the nonconformance, which may require an update to sections of the management plan. See **OBS 2014.10**
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.	C	Biological control is maintained as an option in Chapter 10 of each SFMP. Other State and Federal agencies are in charge of biological control on MD DNR-managed lands. See C6.8 for more details.
7.1.j. The management plan incorporates the results of the evaluation of social impacts, including: • 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).	C	• Sections of Chapter 2 of western MD SFMPs and Chapter 9 of CFL SFMP include descriptions of traditional cultural resources and rights of use. • Sections of Chapter 11 of each western MD SFMP and Chapters 1, 9 and 10 of CFL SFMP describe potential conflicts. • Each of the 5 management plans include text from state code that requires protection of these special sites. Chapter 2 of each SFMP describes sites and GIS data points have been established. Sections of Chapter 11 include a description of the process and time table for consultation and review by representatives of tribal groups. Individual AWPs also include details associated with aesthetics (Kirk Orchard). During the 2014 audit, the protection of special sites (Old homesteads and fenced Walker Cemetery and the North Craft Cemetery) were observed. The fencing had been replaced about 5 years ago. Maps of cemeteries and other special sites were presented and reviewed for 1 State Forest on the eastern shore and 1 State Forest located in western MD. • Aesthetic values are introduced in Chapter 1 and described in Chapter 5 within some of descriptions

		of forest management activities (e.g. forest buffer thinning, regeneration harvest) and in the some of the AWPs (Kirk Orchard). • Chapter 9 and sections of Chapter 10 of each SFMP includes public access, use and education Local and regional economic condition and opportunity are introduced in Chapter 1 and described in sections of chapters 2, 3, 4, 5, 8 and 9 of each SFMP. Chapter 1 of each SFMP includes the following text: "*The primary goal of the Green Ridge State Forest Sustainable Management Plan is to demonstrate that an environmentally sound, sustainably managed forest can contribute to local and regional economies*..." A recent study cited in each SFMP also addresses some of this indicator: see Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change, Phase II: Building societal, economic, and ecological resilience (Jan 2011) http://www.dnr.state.md.us/climatechange/climatechange_phase2_adaptation_strategy.pdf The AWP's summary includes a description of maintenance and protections needs for archeological and historic sites. The AWP includes descriptions of special projects, their costs, and intended benefits. Many special projects are for ecological restoration, public education, road/ trail upgrades for management and recreation.
7.1.k. The management plan describes the general purpose, condition and maintenance needs of the transportation network (see Indicator 6.5.e).	C	Chapters 5, 6 and 9 of the SFMP cover this topic. The AWP's summary includes a description of road conditions and planned maintenance activities based on said conditions.
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.	C	Chapter 5 of the SFMP discusses silvicultural systems based on the resource assessment. Other management systems, such as those used to control access or maintain protected areas, are dealt with in other chapters. See **OBS 2014.10.**
7.1.m. The management plan describes how species selection and harvest rate calculations were developed to meet the requirements of Criterion 5.6.	C	Chapter 5 of the SFMP discusses forest inventory and how harvest rates are determined. Tables and figures of inventory and projected harvests are included SFMP.
7.1.n. The management plan includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.	C	Certain monitoring is covered throughout the SFMP, but Chapters 5 and 10 deal specifically with the subject of monitoring.
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.	C	MD DNR maintains maps on GIS and many maps are available online to the public that address this indicator. Detailed maps are available in the SFMP and AWP for each state forest.
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.	NC	The SFMPs for the Eastern Regions discuss equipment in the general sense; low-impact equipment is desired in certain situations over conventional logging. See **Minor CAR 2014.11**
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.	NC	AWP's summary includes goals for the upcoming fiscal year's management activities. AWP includes a description of proposed management activities, such

Plans clearly describe the activity, the relationship to objectives, outcomes, any necessary environmental safeguards, health and safety measures, and include maps of adequate detail.		as sivilcultural prescriptions. The prescriptions include an analysis of resources that could be impacted and how to reduce/mitigate those risks, as well as objectives and desired outcomes. Pre-sale conferences are held in which a checklist is filled out by loggers and MD DNR staff to review the sale prior to operations. Sediment and erosion control permits may also be required prior to plan implementation and are considered a part of the site-plan. See **Minor CAR 2014.11.**
7.1.r. The management plan describes the stakeholder consultation process.	C	The SFMP describes the role of the Citizens Advisory Committee for each state forest in the development of the plan (Appendix A). The SFMP also includes a flow chart on how AWPs are developed, including when stakeholder consultation and review occurs. The AWP's summary includes a description of how MD DNR Forestry Division works with other agencies and local colleges/universities. Citizen Advisory Committee and public comments are included at the end of each AWP.
C7.2. 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.	C	
7.2.a 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.	C	SFMPs are currently on a 10 year cycle for updating that coincides with forest inventory and resources assessment reviews. All SFMPs are up to date. AWPs are developed annually and can more readily incorporate experience from prior years into the planning process.
C7.3. Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plans.	C	
7.3.a. Workers are qualified to properly implement the management plan; All forest workers are provided with sufficient guidance and supervision to adequately implement their respective components of the plan.	C	MD DNR staff receive certificates for all training completed. Foresters are required to be licensed in Maryland and licensing has a continuing education requirement.
C7.4. 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.	C	
7.4.a. While respecting landowner confidentiality, the management plan or a management plan summary that outlines the elements of the plan described in Criterion 7.1 is available to the public either at no charge or a nominal fee.	C	The entire management plan is available freely to the public at http://www.dnr.state.md.us/forests/mdforests.asp.
7.4.b. Managers of public forests make draft management plans, revisions and supporting documentation easily accessible for public review and comment prior to their implementation. Managers address public comments and modify the plans to ensure compliance with this Standard.	C	All draft AWPs are available for comment at http://www.dnr.state.md.us/forests/workplans/index.asp. When SFMPs are up for revision, these also are made available publicly through the website and submitted to the Citizen Advisory Committee for review. Once draft plans undergo complete public review, the revised plan becomes the final plan presented on the website. See **OBS 2014.12.**
P8 Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of		

the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts. *Applicability Note: On small and medium-sized forests (see Glossary), an informal, qualitative assessment may be appropriate. Formal, quantitative monitoring is required on large forests and/or intensively managed forests.*		
C8.1. 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.	C	
8.1.a. Consistent with the scale and intensity of management, the forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written monitoring protocol.	C	All monitoring occurs per established in SFMPs and AWPs, and as according to MD DNR procedures and policies. Certain monitoring is required per legislation, such as for accounting purposes.
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.**	C	
8.2.a.1. For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.	C	MD DNR maintains an inventory system that covers the topics of this indicator. See 5.6.a for a description. Volume can be estimated from area control through use of site index ranges. The inventory system for the Eastern Region is about to be updated. The Western Region is four years into a five-year project to update its inventory system. SILVAH inventory is used for MD DNR acreage - even those that have been reserved from active timber management (e.g. ESA's or HCVF's). As described in each State Forest management plan, sample points for sensitive resources are selected through the use of random sampling or stratified random sampling. Cluster sampling is occasionally used for rare plants and monitoring may be ongoing or of limited duration. Broader monitoring efforts are part of the program as well. Standard methods available in federal or state manuals or published peer-reviewed research are used to collect data for the following resources: water quality indicators including for example stream nutrient export, wetland condition, fish and aquatic macro invertebrate assemblages; forest stand condition indicators including for example vegetative structure and composition including (a) species; (b) volumes; ((c) stocking; (d) regeneration; (e) stand composition and structure and (f) timber quality, invasive species, natural plant communities, insect and disease impacts, fuel loading and stand density; rare, threatened and endangered species presence, diversity and abundance; and presence of invasive species that threaten the survival of rare, threatened or endangered species; natural community diversity metrics; and other indicators of ecosystem recovery and function.

		As confirmed through interviews with field foresters, regeneration surveys are conducted following regeneration treatments within one or two years for loblolly in the eastern region and after 3-5 years for hardwood stands in the western region. If regeneration surveys conclude that regeneration levels are not sufficient, planting or other measures are discussed. CFI summary and the stand data collection program (SILVAH protocol) are detailed in SFMP Chapter 12. The inventory and monitoring programs are linked to a GIS-based data management system.
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.	C	CFI summary and current stand data collection program (SILVAH OAK protocol in the western region) provides monitoring and records as confirmed through review of SFMP Chapter 12 and interviews. For example the 160-acre gypsy moth mortality (SR-01-11) was first documented in 2009 including a salvage prescription. Records are linked to the GIS-based data management system and include dates and locations, description of the gypsy moth and ice storm incident, acreage and percent mortality estimates including maps of the area. In another example > 400 acres of GRSF received overstory mortality that approaches 100% as a result of a Memorial Day 2011 hail storm. The affected areas are mapped. Records include required details. In the Western Region, the winter storms of 2011 led to much loss. Some of the affected areas were salvaged. MD DNR detected the losses after post-storm monitoring. No significant timber theft was reported by MD DNR staff or stakeholders for the Eastern Region.
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.	C	Ledgers, annual timber summaries and compartment files that relate to harvested timber are maintained in the state office. MD DNR maintains records of harvested timber on GIS and a timber sale contract database (area, acres, volumes, income tracking). These records are used to compare projected harvest to actual harvest. Records of the collection of NTFP, American ginseng (*Panax quinquefolius*) are maintained by the MD Department of Agriculture and are available to MD DNR. In the past, MD DNR implemented its own system of record keeping specific to the collection of this NTFP within each of the 3 western State Forests. More recently MD DNR's Secretary issued the following policy. Ginseng: Harvest prohibition on State Lands (March 2013).
8.2.c. The forest owner or manager periodically obtains data needed to monitor presence on the FMU of: 1) Rare, threatened and endangered species and/or their ***habitats***; 2) Common and rare plant communities and/or habitat;	C	6) RTE data and monitoring is accomplished through the ID team process and an established relationship with the MD Natural Heritage Program as confirmed through interviews with Natural Heritage Program staff. 7) Common and rare plant communities and habitats

3) Location, presence and abundance of invasive species; 4) Condition of protected areas, set-asides and buffer zones; 5) High Conservation Value Forests (see Criterion 9.4).		are monitored through the use of SILVAH OAK inventory system. In addition, the Wildlife and Heritage Service, and Fresh Water Fisheries gather information on plant and animal populations. 8) The recently developed Early Detection and Rapid Response Plan, associated monitoring protocol and 2 associated recent research projects are led by DNR's Heritage program to monitor invasive species. SILVAH OAK inventory system also includes documentation of the presence of invasive plants. In addition, it is clear from site observations and staff interviews that the DNR staff is well-trained and knowledgeable about this issue. 9) Zones including protected HCVF, buffer zones, Wildlands, RSAs and Old Growth are monitored through stand level inventory (SILVAH OAK protocol). 10) See item 4 above.
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.	C	In the eastern region, Parker Forestry completes inspection forms on Chesapeake Forest Project and MD DNR foresters also inspect tracts and fill out reports. Pocomoke State Forest inspections are completed solely by DNR forestry staff. In the western region, MD DNR field foresters conduct post-harvest monitoring and complete Timber Sale Inspection Reports that were presented and reviewed for each of the sites visited during this audit program. This FME also instituted an internal silvicultural audit system to examine the environmental and management impacts of silvicultural activities. This monitoring system was recently been expanded to include a post-harvest review by the ID team. Logging contractors reported that MD DNR staff conduct site visits at least once per week during active harvests. Timber Sale Inspection forms are maintained for these visits. This form is used for the final inspections.
8.2.d.2. A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.	C	A *Forest Roads Management For Forest Operations on Maryland State Forests* 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. A bill was introduced in the current session of the Maryland Legislature that annually adds funds into State Forest roads maintenance projects. The road inventory portion of this process has been completed as confirmed through interviews and review of the prioritization list of road inventory improvement projects. MD DNR also instituted an internal monitoring system to examine the environmental and management impacts of silvicultural activities. This monitoring system was recently been expanded to include a post-harvest review by the ID team as

		described elsewhere in this report.
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).	NC	Through the ID Team, Forest Advisory Committee and other cooperative processes, this FME conducts many socioeconomic analyses and monitoring activities through partnership with other departments within the DNR and other state or federal agencies. However, a formal monitoring system that addresses the components of indicator 8.2.d.3 has not been determined. See **Minor CAR 2014.13**
8.2.d.4. Stakeholder responses to management activities are monitored and recorded as necessary.	C	MD DNR maintains a complaint log in SF offices. Records were examined for Savage River SF. Each forest manager responds to inquiries and complaints with direct communications. When these cannot be resolved locally the issue is occasionally referred to the Annapolis office. The main mechanism for soliciting comments is response to each posted State Forest Management Plans and Annual Work Plan that details the proposed activities for the upcoming year
8.2.d.5. Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3).	NA	There are no such sites on MD DNR lands. However, MD DNR offered this opportunity to Tribes participating in the CAC. In addition, MD DNR is cooperating with the MD Commission of Indian Affairs.
8.2.e. The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.	C	Cost and revenue is monitored as part of the Annual Work Plan process. The current Annual Work Plan contains a summary of cost and revenue information. Each SF has its own operational budget. Each SF maintains a spreadsheet and reports these to state offices in Annapolis. Accounting reviews all expenditures.
C8.3. Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."	C	
8.3.a. When forest products are being sold as FSC-certified, the forest owner or manager has a system that prevents mixing of FSC-certified and non-certified forest products prior to the point of sale, with accompanying documentation to enable the tracing of the harvested material from each harvested product from its origin to the point of sale.	C	Timber sale contracts for each site described in section 2.1 (field tour) were reviewed and include for example a description of the location of harvest and FM/COC code, the FSC claim ("FSC 100 %") and maps of the harvested stand(s). There is no risk of mixing certified and non-certified products prior to the point of sale because each State Forest where certified products are harvested is entirely certified. While small parcels are not included in the certified land base, the non-certified parcels are geographically separate from the certified parcels and these non-certified parcels do not include routine harvest of timber but instead may involve only occasional demonstration or salvage projects.
8.3.b The forest owner or manager maintains documentation to enable the tracing of the harvested material from each harvested product from its origin to the point of sale.	C	Timber sale contract copies are maintained and were reviewed for each site described in section 2.1 (field tour). Each contract includes for example a description of the location of harvest and the FM/COC code, the FSC claim ("FSC 100 %") and maps of the harvested stand(s). Gatewood sale documentation also includes delivery slips in the form of trip tickets and settlement sheets and each of these delivery documents also includes a description of the location of harvest and

		the FM/COC code and the FSC claim ("FSC 100 %"). Gatewood documents associated with contract # CF-6-14 were reviewed as evidence.
C8.4. The results of monitoring shall be incorporated into the implementation and revision of the management plan.	C	
8.4.a. The forest owner or manager monitors and documents the degree to which the objectives stated in the management plan are being fulfilled, as well as significant deviations from the plan.	C	Monitoring results of ongoing projects are frequently reported on in AWPs, including on whether or not project objectives are being met. Monitoring reports are also published on the MD DNR website. BMP monitoring and forest inventory updates occur on schedule every few years so that achievement of forest management objectives can be assessed.
8.4.b. Where monitoring indicates that management objectives and guidelines, including those necessary for conformance with this Standard, are not being met or if changing conditions indicate that a change in management strategy is necessary, the management plan, operational plans, and/or other plan implementation measures are revised to ensure the objectives and guidelines will be met. If monitoring shows that the management objectives and guidelines themselves are not sufficient to ensure conformance with this Standard, then the objectives and guidelines are modified.	C	Regular management planning update processes under C7.2 are being used to ensure that monitoring information is being incorporated into the plans.
C8.5. 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.	NC	
8.5.a. While protecting landowner confidentiality, either full monitoring results or an up-to-date summary of the most recent monitoring information is maintained, covering the Indicators listed in Criterion 8.2, and is available to the public, free or at a nominal price, upon request.	NC	See **Major CAR 2014.14**
P9 Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach. **High Conservation Value Forests are those that possess one or more of the following attributes:** **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).**		
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.	C	
9.1.a. The forest owner or manager identifies and 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.	C	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

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.		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.
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.	C	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.
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.	C	*The Sustainable Forest Management Plan Public Summary* for example for the PSF and the CPSF were reviewed and include a summary of HCVF assessment results, management strategies.
C9.2. The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.	C	
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.	C	Eastern shore: Stakeholder consultation meetings were held in 2006 to determine HCVF boundaries and maintenance options. 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.
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.	C	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.
C9.3. The management plan shall include and 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.	C	
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.	C	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. 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 in an attempt 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 in order 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.
9.3.b. All management activities in HCVFs must maintain or enhance the high conservation values and the extent of the HCVF.	C	Each SFMP describes the management activities within HCVFs. For example, the GRSF plan states "*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*)…" 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.
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.	C	As confirmed through interviews with a local NGO, field staff and MD DNR Natural Heritage, this FME routinely coordinates management across ownership boundaries. Examples of cross-boundary maintenance of HCVs were not observed during this audit.
C9.4. Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.	C	
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.	C	Nearly all of the State's HCVF is designated as "no management". Thus the need for regular monitoring is greatly reduced due to the lack of potential impacts from management although monitoring does occur in HCVF areas. As confirmed through interviews, annual work plan review and management plan review, monitoring of HCV attributes occurs through: • Stand level inventory of the forest using SILVAH OAK methodology. • Heritage Ecologist's formal and informal surveys and research of ESA's and other designated areas.
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.	C	Each SFMP Chapter 10 and the current Annual Work Plans include a description of this process. Implementation of this requirement was observed for example in the April 2011 treatment and October 2012 follow-up of Garlic Mustard (*Alliaria petiolata*) Control Project - Wallman/Laurel Run Compartments 21-26. The current annual work plan includes this control project for the 5th year of a possible 5-7 multi-year backpack application of Glyphosate to control garlic mustard. While the treatments are considered to be reasonably effective, follow-up monitoring and treatment is necessary due to potential impacts to the nearby weed-free ESA and HCVF communities if this non-native invasive plant is not controlled.
P10 Plantations shall be planned and managed in accordance with Principles and Criteria 1-9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration		

and conservation of natural forests. Given current management practices and desired future conditions described in SFMPs, as well as observation of implementation of management practices in the Eastern and Western Regions, all state forestland is being managed under a semi-natural management regime. Retention and site-preparation practices in the Eastern Region are at higher levels than in comparable semi-natural-managed stands of the US Southeast. Moreover, rotations of the Southern Yellow Pine species are in most cases more than double (60-80 years) those of typical southern plantation management. Areas where exotic species (e.g., *Picea abies*) and native species have been planted offsite (e.g., *Pinus resinosa*) are being managed to restore natural species composition or mixed conifer-hardwood semi-natural forests.		
APPENDICES		
APPENDIX C: REGIONAL LIMITS AND OTHER GUIDELINES ON OPENING SIZES 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 **Indicator 6.3.g.1**		
APPALACHIA REGION		
Indicator 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. ***Guidance:*** *Even-age silviculture is used only where naturally occurring species are maintained or enhanced. Retention within harvest units can include 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.*	NC	Live trees and native vegetation are retained in even-aged management systems; however even-aged salvage and variable retention units visited live trees on these sites were not retained in a manner consistent with the proportion and configuration of the natural disturbance regime. For example, live small diameter white oaks were designated for removal where crown competition was not yet a significant factor in the salvage area; and live oaks were not well-distributed spatially in the clearcut with variable retention (live oaks were retained only in islands). See **Minor CAR 2014.7.**
Indicator 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:*** *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.*	C	Where uneven-aged management is in use, canopy openings are less than 2.5 acres in size. A very small amount of the Western Region is under this type of management.
SOUTHEAST REGION		
Indicator 6.3.g.1.a Primary and natural forests: clear-cutting is not allowed. Harvesting is not allowed at all in ***primary forests***. Semi-natural forests: stands with trees greater than 100 years old: clear-cutting is not allowed; even-aged stands of hardwood and cypress: clear-cutting is allowed; the size of openings should be conservative.	C	Within the eastern shore State Forests (Southeast Region) even-aged silviculture including final stage of shelterwood (overstory removal) are restricted to previously established pine plantations that are being managed as natural stands and openings that are less than 40 acres in size (except in the case of restoration plans developed by in cooperation with the MD DNR Natural Heritage and which is based on best available science).

Even-aged stands of pine and pine/hardwood: clear-cutting is allowed; the size of openings should not be higher than the limit for plantations and should be justified by natural regeneration requirements. Clear-cuts up to 80 acres are allowed in cases where a 40-acre stand would not provide enough timber volume to secure an economically operable timber sale, meaning that the sale would not attract a buyer and/or the landowner would not make a profit from the sale. Examples of such cases include stands that have been high graded and the most valuable species of trees have already been removed, or where a site has been planted with inappropriate, poorly growing species and the landowner/manager wants to clear and restore the site. This exception cannot be used when a 40-acre clearcut would be economically operable and a landowner wants to cut 80 acres simply to make a greater profit. Clearcuts up to 80 acres are allowed in cases where harvesting a stand in 40 acre blocks would cause unnecessary environmental disturbance to the area surrounding the stand. An exception to all of the limits on the use and size of clearcuts can be made in cases of ecologic necessity. Clearcutting may be used in natural forest stands--where appropriate and necessary--as a tool for maintaining ecosystems that are dependent on large, contiguous openings. An example is the sand pine scrub ecosystem, which supports the ecologically significant Florida scrub jay and is currently being managed with large, contiguous clear-cuts. Ecologists urge the use of large clearcuts in the sand pine scrub ecosystem to mimic the stand-replacing, catastrophic fires that historically maintained the ecosystem. This exception may only be used when supported by scientific literature.		See also section 2.1 (field tour). There are no limitations on opening size limits in the Southeastern regional indicators; however, there are suggested opening size limits (80 acres). The average clearcut size is 40 acres, but MD DNR has had openings that of 120-160 acres in the case of restoration of wetland ecosystems where pine was planted or invaded after disturbance (e.g., Nassawango Pines Restoration Project). In these cases, wetland hydrology is often restored and pines are removed with the intent of restoring natural plant communities. As confirmed through interviews with biologists, MD DNR Heritage staff and plan review, the completed Nassawango Pines Restoration Project that involved a 158-acre final harvest is one example of a qualified plan that included minor departures from the opening size limits. While not technically required by the SE Regional Indicators for 6.3.g.1, this restoration project includes a qualified plan as described in items 1-5 of this section.
APPENDIX E: STREAMSIDE MANAGEMENT ZONE (SMZ) REGIONAL REQUIREMENTS **Indicator 6.5.e** This Appendix addresses regionally explicit requirements for Indicator 6.5.e and includes SMZ widths and activity limits within those SMZs for the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions. The forest owner or manager will be evaluated based on the sub-indicators within their specific region, below.		
APPALACHIA REGION *The SMZ is designed to allow harvesting and provide flexibility for silvicultural management.*		
6.5.e.1.a All ***perennial streams*** have buffers (streamside management zones, SMZs) that include an inner SMZ and an outer SMZ. SMZ sizes are minimum widths that are likely to provide adequate riparian habitat and prevent siltation. If functional riparian habitat and minimal siltation are not achieved by SMZs of these dimensions, wider SMZs are needed.	NC	SMZ guidelines are provided in SFMPs for each state forest and actual SMZs are mapped in the GIS. FME prepared the Western Maryland Erosion and Sediment Control Standards and Specifications for Forest Operations in 2011 that contains SMZ widths based on the "50' + (4' * x%)" principle. For smaller slope %, such as those between the APP 1-10% and 11-20% category, minimum widths depart from the minimum widths required by FSC. For larger slope %, FME's SMZ widths exceed APP requirements. These SMZs are based on watershed studies and have been reviewed by the FME's hydrologist. See **Minor CAR 2014.8.**
Table 6.5.f (APP only) Widths of inner and outer Streamside Management Zones. Widths of outer SMZs are applicable where data do not support narrower widths*		

Stream Zone Type	SLOPE CATAGORY				
	1-10%	**11-20%**	**21-30%**	**31-40%**	**41%+**
Inner Zone (Perennial)	25’	25’	25’	25’	25’
Outer Zone (Perennial)	55’	75’	105’	110’	140’
Total For Perennial	80’	100’	130’	135’	165’
Zone For Intermittent	40’	50’	60’	70’	80’
*All distances are in feet -slope distance and are measured from the high water mark.					

6.5.e.1.b (APP only) The inner SMZ for *non-high-quality waters* (see state or local listings describing the highest quality waters in the state or region) extends 25 feet from the high water mark. Single-tree selection or small group selection (2-5 trees) is allowed in the inner SMZ, provided that the integrity of the stream bank is maintained and canopy reduction does not exceed 10 percent (90 percent canopy maintenance). Trees are directionally felled away from streams. Note: The inner SMZ is designed as a virtual no-harvest zone, while allowing the removal of selected high-value trees.	NC	According to State BMPs, http://www.dnr.state.md.us/forests/landplanning/bmp.html: *Buffer Management Plans* *The Standard Plan requires that uncut buffer zones, called Streamside Management Zones (SMZ), be maintained on all sides of perennial or intermittent streams, rivers, lakes, ponds, bogs or marshes. The width of the buffer is dependent upon the slope of the land adjacent to the watercourse. Because of the high potential for soil compaction, erosion and stream damage, roads, trails and harvesting equipment are not allowed in the buffer except as approved in a ‘Modification of the Standard Plan’ or to provide access to approved stream crossings.* *The Standard Plan does, however, allow limited harvesting within the buffer provided that a "Buffer Management Plan" is prepared by a licensed forester. "Buffer Management Plans" need to be very specific in describing which trees are to be cut, what precautions for sediment control will be taken, and where the sediment controls will be located. The location of any harvesting within a buffer must be identified on a sketch of the buffer. The sediment controls to be used for waterway protection and topography within the buffer must also be located on this sketch.* Since variations technically are permitted, MD DNR must ensure that these are in conformance to 6.5.e.2. See **Minor CAR 2014.8.**
6.5.e.1.c (APP only) Along perennial streams that are designated as *high-quality waters* (see state or local listings describing the highest quality waters in the state or region), no harvesting is allowed in the inner SMZ (25 feet from the high water mark), except for the removal of wind-thrown trees. Stream restoration is allowed if a written restoration plan provides a rational justification and if the plan follows local and regional restoration plans.	NC	See 6.5.e.1.b. See **Minor CAR 2014.8.**
6.5.e.1.d (APP only) Outer SMZs, outside and in addition to inner SMZs, are established for all intermittent, and perennial streams, as well as other waters. When the necessary information is available, the width of a stream management zone is based on the landform, erodibility of the soil, stability of the slope, and stability of the stream channel as necessary to protect water quality and repair	NC	See 6.5.e.1.b. See **Minor CAR 2014.8.**

habitat. When such specific information is not available, the width of streamside management zone is calculated according to Table 6.5.f		
6.5.e.1.e (APP only) Harvesting in outer SMZs is limited to single-tree and group selection, while maintaining at least 50 percent of the overstory. Roads, skid trails, landings, and other similar silviculturally disturbed areas are constructed outside of the outer SMZ, except for designated stream crossings or when placement of disturbance-prone activities outside of the SMZ would result in more environmental disturbance than placing such activities within the SMZ. Exceptions may be made for stream restoration.	NC	See 6.5.e.1.b. See **Minor CAR 2014.8.**
6.5.e.1.f (APP only) The entire SMZ of intermittent streams is managed as an outer buffer zone.	NC	See 6.5.e.1.b. See **Minor CAR 2014.8.**
6.5.e.1.g (APP only) The activities of forest management do not result in observable siltation of intermittent streams. The activities of forest management do not result in observable siltation of intermittent streams.	NC	See 6.5.e.1.b. See **Minor CAR 2014.8.**
SOUTHEAST REGION		
6.5.e.1 (SE only) Streamside or special management zones (SMZs) are specifically described and/or referenced in the management plan, included in a map of the forest management area, and designed to protect and/or restore water quality and aquatic and riparian populations and their habitats (including river and stream corridors, steep slopes, fragile soils, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas). At a minimum, management of SMZs has the following characteristics: Management meets or exceeds state BMPs. SMZ width reflects changes in forest condition, stream width, slope, erodibility of soil, and potential hazard from windthrow along the length of the watercourse. SMZs provide sufficient vegetation and canopy cover to filter sediment, limit nutrient inputs and chemical pollution, moderate fluctuations in water temperature, stabilize stream banks, and provide habitat for riparian and aquatic flora and fauna. Characteristic diameter-class distributions, species composition, and structures are adequately maintained within the SMZs.	C	MD DNR follows its BMP guidelines for water courses in the Eastern Region. Buffer widths and management practices are the same as for the Western Region, so retention is typically at a level that meets or exceeds the suggestions of this indicator. See http://www.dnr.state.md.us/forests/landplanning/bmp.html for further details.

Appendix 6 – Tracking, Tracing and Identification of Certified Products

SCS FSC Chain of Custody Indicators for Forest Management Enterprises, Version 5-1

REQUIREMENT	C/NC	COMMENT/CAR
1. Quality Management		
1.1 The organization shall appoint a management representative as having overall responsibility and authority for the organization's compliance with all applicable requirements of this standard.	C	As confirmed through review of COC procedures, interviews with Jack Perdue and field staff, Jack Perdue has been appointed as the Chain of Custody Administrator with responsibility and authority for this FME's conformance with the requirements of this standard.
1.2 The FME shall maintain complete records of all FSC-related COC activities, including sales and training, for at least 5 years.	C	This FME's sale records were presented and reviewed and appear to be complete for at least the past 5 years. COC procedures and training records have been created, maintained and presented.
1.3 The FME shall define its forest gate(s) (check all that apply): *The forest gate is defined as the point where the change in ownership of the certified-forest product occurs.*	C	[ ] **Stump** *Stumpage sale or sales of standing timber; transfer of ownership of certified-forest product occurs upon harvest.* [ ] **On-site concentration yard** *Transfer of ownership of certified-product occurs at concentration yard under control of FME.* [ ] **Off-site Mill/Log Yard** *Transfer of ownership occurs when certified-product is unloaded at purchaser's facility.* [ ] **Auction house/ Brokerage** *Transfer of ownership occurs at a government-run or private auction house/ brokerage.* [x] **Lump-sum sale/ Per Unit/ Pre-Paid Agreement** *A timber sale in which the buyer and seller agree on a total price for marked standing trees or for trees within a defined area before the wood is removed — the timber is usually paid for before harvesting begins. Similar to a per-unit sale.* [ ] **Log landing** *Transfer of ownership of certified-product occurs at landing/yarding areas.* [ ] **Other** *(Please describe):*

1.4 The FME shall have sufficient control over its forest gate(s) to ensure that there is no risk of mixing of FSC-certified forest products covered by the scope of the FM/COC certificate with forest products from outside of the scope prior to the transfer of ownership.	C	This FME sells certified materials as stumpage and lump sum, pre-paid agreements from western MD State Forests In western MD volume is paid for before the trees are harvested with no risk of mixing certified products with non-certified products. This FME sells certified materials as gate wood (in essence stumpage sales; the contract for gatewood specifies that the sale is at the stump) and stumpage and lump sum, pre-paid agreements from eastern shore State Forests. There is no risk of mixing of FSC-certified forest products with non-certified forest products (gate wood sales) because deliveries include specific trip ticket delivery documents that are associated with each product sale area. Other lands owned and managed by this FME are not certified; however, those lands are geographically distinct from certified land as confirmed through interviews and review of the maps of the other properties and rarely include timber harvest activities.
1.5 The FME and its contractors shall not process FSC-certified material prior to transfer of ownership at the forest gate without conforming to applicable chain of custody requirements. *NOTE: This does not apply to log cutting or de-barking units, small portable sawmills or on-site processing of chips/biomass originating from the FMU under evaluation.*	C	No processing occurs prior to transfer of ownership. This FME sells certified materials as stumpage and lump sum, pre-paid agreements and gate wood (in essence stumpage sales). The gate wood sales include tree cutting and log hauling and are in conformance to the COC requirements.
2. Product Control, Sales and Delivery		
2.1. Products from the certified forest area shall be identifiable as certified at the forest gate(s).	C	A variety of contracts were presented and reviewed. These documents include the identification of these products as certified (FSC 100%).
2.2 The FME shall maintain records of quantities/volumes of FSC-certified product(s).	C	A variety of timber sale contracts, trip tickets, wood settlement sheets and a timber harvest summary spreadsheet (2004 to 2014) were presented and reviewed and include the volume of products sold.

2.3. The FME shall ensure that all sales documents issued for outputs sold with FSC claims include the following information: a) name and contact details of the organization; b) name and address of the customer; c) date when the document was issued; d) description of the product; e) quantity of the products sold; f) the organization's FSC Forest Management (FM/COC) or FSC Controlled Wood (CW/FM) code; g) clear indication of the FSC claim for each product item or the total products as follows: i. the claim "FSC 100%" for products from FSC 100% product groups; ii. the claim "FSC Controlled Wood" for products from FSC Controlled Wood product groups. h) If separate transport documents are issued, information sufficient to link the sales document and related transport documentation to each other.	C	A variety of timber sale contracts, trip tickets and wood settlement sheets were presented and reviewed for each site described in section 2.1 (field tour). Contracts are created on the basis of an existing template that includes each of the required items a-g. Specifically, this FME's FSC Forest Management (FM/COC) code and a clear indication of the FSC claim (FSC 100%) are included in this template and recent contracts. Separate transport documents (item h) are used in eastern shore State Forest contracts only and include sale name to link the trip ticket to the sale document (timber sale contract). Gate wood documents and wood settlement sheets associated with contract # CF-6-14 and Waller-Tayler Tract Stands 3, 4, 5 were reviewed as evidence.
2.4 The FME shall include the same information as required in 2.3 in the related delivery documentation, if the sales document (or copy of it) is not included with the shipment of the product. **Note: 2.3 and 2.4 above are based on FSC-STD-40-004 V2-1 Clause 6.1.1 and 6.1.2**	C	When this FME sells certified materials as stumpage and lump sum, pre-paid agreements, the trees are paid for before the trees are harvested and the purchaser is responsible for shipping documents. When this FME sells certified materials as gate wood, the sales document (contract) is not included with the shipment of this product (eastern shore State Forest contracts only). In these cases, the shipping documents include each of the requirements (a-h) of section 2.3 and FSC-STD-40-004 V2-1 Clause 6.1.1. Gate wood trip tickets and wood settlement sheets associated with contract # CF-6-14 and Waller-Tayler Tract Stands 3, 4, 5 were reviewed as evidence.

2.5 When the FME has demonstrated it is not able to include the required FSC claim as specified above in 6.1.1 and 6.1.2 in sales and delivery documents due to space constraints, through an exception, SCS can approve the required information to be provided through supplementary evidence (e.g. supplementary letters, a link to the own company's webpage with verifiable product information). This practice is only acceptable when SCS is satisfied that the supplementary method proposed by the FME complies with the following criteria: a) There is no risk that the customer will misinterpret which products are or are not FSC certified in the document; b) The sales and delivery documents contain visible and understandable information so that the customer is aware that the full FSC claim is provided through supplementary evidence; c) In cases where the sales and delivery documents contain multiple products with different FSC Claims, a clear identification for each product shall be included to cross-reference it with the associated FSC claim provided in the supplementary evidence. *FSC-ADVICE-40-004-05*	NA	
3. Labeling and Promotion		☐ **n/a**
3.1 Describe where/how the organization uses the SCS and FSC trademarks for promotion.	NC	Website does not include the full promotional panel. Management documents that are linked to the website and observed in hard copy include FSC trademarks that are not in conformance with the most recent version of the trademark standard. The FME requested and received permission to use trademarks in 2009 and 2011 and the promotional trademark use on the website and management documents was in conformance with the previous trademark standard at that time. However the 2011 trademark review email from SCS clearly indicates that the approved promotional use will not be in conformance soon. For example page iii on http://www.dnr.state.md.us/forests/pdfs/CF-PSF_AWP_FY2014_summary.pdf **See CAR 2014.14**

3.2 The FME shall request authorization from SCS to use the FSC on-product labels and/or FSC trademarks for promotional use.	NC	MD DNR requested and received permission to use promotional trademarks in 2009 and 2011. However the 2011 trademark review email from SCS clearly indicates that the approved promotional use will not be in conformance soon. This FME did not follow-up with SCS to obtain updated promotional trademarks for its documents and the agency website. **See CAR 2014.14** See also FSC-STD-50-001 indicator 6.1
3.3 Records of SCS and/or FSC trademark use authorizations shall be made available upon request.	C	Email correspondence from 2009 and 2011 between MD DNR and SCS were presented and reviewed.
4. Outsourcing		[x] **n/a**
4.1 The FME shall provide the names and contact details of all outsourced service providers.		Logging and transportation of forest products are considered low risk and therefore these indicators are NA.
4.2 The FME shall have a control system for the outsourced process which ensures that: a) The material used for the production of FSC-certified material is traceable and not mixed with any other material prior to the point of transfer of legal ownership; b) The outsourcer keeps records of FSC-certified material covered under the outsourcing agreement; c) The FME issues the final invoice for the processed or produced FSC-certified material following outsourcing; d) The outsourcer only uses FSC trademarks on products covered by the scope of the outsourcing agreement and not for promotional use.		
5. Training and/or Communication Strategies		
5.1 All relevant FME staff and outsourcers shall be trained in the FME's COC control system commensurate with the scale and intensity of operations and shall demonstrate competence in implementing the FME's COC control system.	C	FME staff members are knowledgeable of the COC control system and standard. A COC plan has been established, implemented, presented and reviewed.
5.2 The FME shall maintain up-to-date records of its COC training and/or communications program, such as a list of trained employees, completed COC trainings, the intended frequency of COC training (i.e. training plan), and related program materials (e.g., presentations, memos, contracts, employee handbooks, etc).	C	A COC communications program and records of training were presented and reviewed.

Appendix 7 – Peer Review and SCS Evaluation Team Response to Peer Review

No peer review is required for recertification audits.