

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

Commonwealth of Pennsylvania, DCNR Bureau of Forestry
Pennsylvania, United States of America

SCS-FM/COC-00011N

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CERTIFIED	EXPIRATION
Jan 1 2014	Dec 31 2018

DATE OF FIELD AUDIT
26-30/Aug/2013
DATE OF LAST UPDATE
16/Dec/2013

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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	PA Department of Conservation and Natural Resources, Bureau of Forestry		
Contact person	Chad R. Voorhees		
Address	PO Box 8552 Harrisburg, PA 17105-8552	Telephone	717-425-5368
		Fax	717-783-5109
		e-mail	chvoorhees@pa.gov
		Website	http://www.dcnr.state.pa.us/forestry/index.aspx

1.1.1.b FSC Sales Information

<input checked="" type="checkbox"/> FSC Sales contact information same as above.			
FSC salesperson			
Address	Telephone		
	Fax		
	e-mail		
	Website		

1.1.2 Scope of Certificate

Certificate Type Forest Management	<input checked="" type="checkbox"/> Single FMU	<input type="checkbox"/> Multiple FMU
	<input type="checkbox"/> Group	
SLIMF (if applicable)	<input type="checkbox"/> Small SLIMF certificate	<input type="checkbox"/> Low intensity SLIMF certificate
	<input type="checkbox"/> Group SLIMF certificate	
# Group Members (if applicable)		
Number of FMU's in scope of certificate	1	
Geographic location of non-SLIMF FMU(s)	Latitude & Longitude:	
Forest zone	<input type="checkbox"/> Boreal	<input checked="" type="checkbox"/> Temperate
	<input type="checkbox"/> Subtropical	<input type="checkbox"/> Tropical
Total forest area in scope of certificate which is:		Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac
privately managed	0	
state managed	2,161,775.71 - 16,904.64 (excluded) = <u>2,144,871.07</u>	

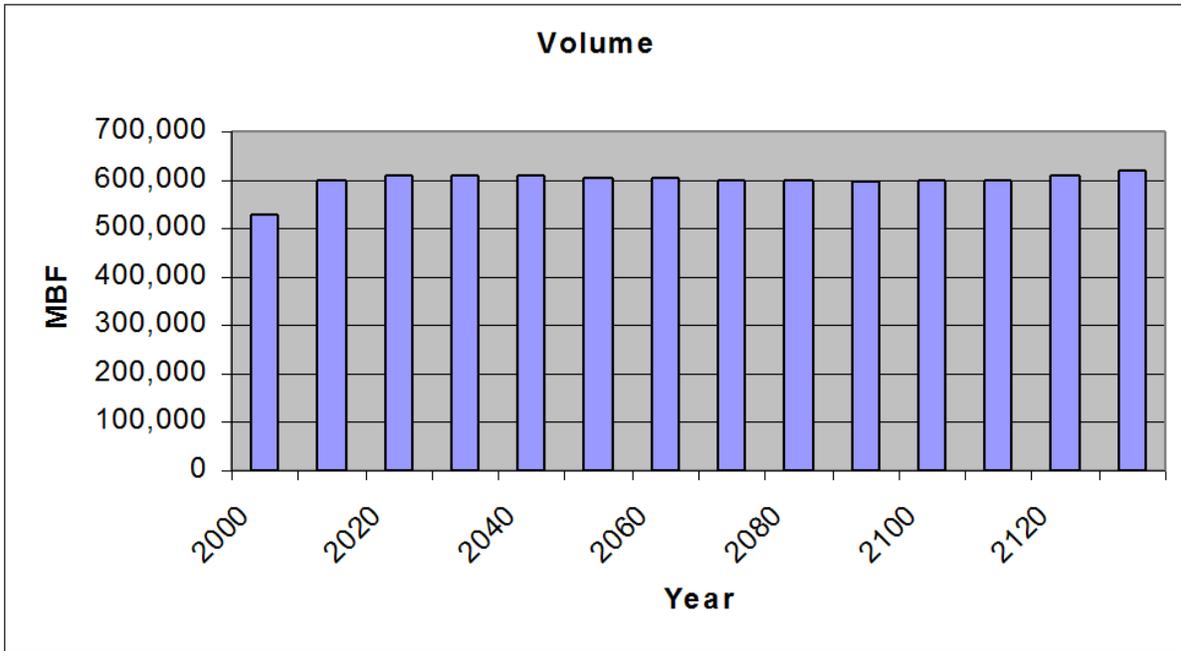
	Note: As part of the DCNR BoF Approach to excision 2011 the FME is undergoing an analysis to excise acres where subsurface rights are owned by another entity and development is occurring. This analysis is underway and should be ready for excision 2014.		
community managed	0		
Number of FMUs in scope that are:			
less than 100 ha in area		100 - 1000 ha in area	
1000 - 10 000 ha in area		more than 10 000 ha in area	1
Total forest area in scope of certificate which is included in FMUs that:			Units: <input type="checkbox"/> ha or <input type="checkbox"/> ac
are less than 100 ha in area			
are between 100 ha and 1000 ha in area			
meet the eligibility criteria as <i>low intensity</i> SLIMF FMUs			
Division of FMUs into manageable units:			
The forests within the FMU are broken down into 20 forest districts state-wide.			

1.2 FSC Data Request

1.2.1 Production Forests

Timber Forest Products	Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac
Total area of production forest (i.e. forest from which timber may be harvested)	1,101,503.44 Classified "Multiple Resource Management Zone". Timber harvests in other zones may be allowed if warranted under extenuating circumstances. File Reference: DCNR_Management_Zoning.xml
Area of production forest classified as 'plantation'	None
Area of production forest regenerated primarily by replanting or by a combination of replanting and coppicing of the planted stems	4,576 Area reflects planting for recovery efforts in Gypsy Moth salvage operations where there was an absence of adequate natural regeneration. Additional areas are planted to supplement natural regeneration or to increase habitat diversity.
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	5,902
Silvicultural system(s)	Area under type of management (CY 2012 acres)
Even-aged management	File reference: Summary_Timber_Products_2012.docx
Clearcut (clearcut size range 10-70)	366
Shelterwood (initial stage)	3,418
Shelterwood (overstory removal)	5,309

Other:	Improvement – 1,527 Two Aged – 837 Two Aged Shelterwood – 112 Salvage – 610 Misc – 90 O&G related - 369 (sold as Uncertified – BF-16 Invoice)
Uneven-aged management	
Individual tree selection	349
Group selection	
Other:	
<input checked="" type="checkbox"/> Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	The PA DCNR BOF Nursery (Penn Nursery) which is not included in the certificate is 325 acres. Growing stock is for BOF or State Park use only. There is a golf course lease which is also not included Under the certificate and is 61 acres.
The sustainable rate of harvest (usually Annual Allowable Harvest or AAH where available) of commercial timber (m3 of round wood)	14,337 acres per year 87,215 MBF/year Or 303,508 m ³ This figure includes both sawtimber and cordwood projected by the Harvest Allocation Model Assuming 1,000 board feet = 3.48 cubic meters



Projected long-term sustainable *sawtimber* volume flow from Pennsylvania state forests per 10-year planning period (Figure 3, Harvest Allocation Model).

Sawtimber Bd Ft	+	Pulpwood Bd Ft Equivalent	=	Total Volume Bd Ft
↓		↓		↓
60,321,553 Bd Ft/Year	+	26,893,398 Bd Ft/Year	=	87,214,951 Bd Ft/Year

Annualized sawtimber plus pulpwood sustainable volume harvest rate

From the *Pennsylvania Bureau of Forestry, Forest Products Statistical Report 2012*:

The goals have been annualized into a **14,337 acre per year** harvest goal.

In 2012, 12,618 acres were contracted for harvesting.

An estimated 47 million board feet (**47,000 MBF**) sawtimber plus 2,785,500 ft³ pulpwood (**22,666 MBF** equivalents) for a total of **69,666 MBF** of forest products were sold to timber producers in 2012.

File Reference: *Timber_Harvest_Report_2012.PDF* pg. 5-7 (STATE FORESTER TIMBER STUMPAGE CONTRACTS INCLUDES ONLY SALES FOR WHICH FULLY EXECUTED CONTRACT WAS FORWARDED BY THE SILVICULTURE SECTION TO THE DISTRICT FORESTER FROM 1/1/2012 TO 12/31/2012)

Pulpwood to MBF conversion based on:
 1 cubic foot = 0.02831685 cubic meters
 1,000 board feet = 3.48 cubic meters

Non-timber Forest Products (NTFPs)	
Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services	1,060,272.27 acres are afforded varying levels of protection. Strict reserves include State Forest Natural areas - 79,189.55 acres. File Reference: DCNR_Management_Zoning.xml
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	No commercial production of NTFPs
Explanation of the assumptions and reference to the data source upon which AAH and NTFP harvest rates estimates are based:	
File References: Harvest_Goals.pdf HarvestAllocationModel.doc ManningPJ__MSThesis2009.pdf Model Description.doc Timber_Harvest_Report_2012.PDF	
Species in scope of joint FM/COC certificate: <i>Scientific/ Latin Name (Common/ Trade Name)</i>	
<p><i>Pinus strobus</i> (White Pine) <i>Tsuga Canadensis</i> (Eastern Hemlock) <i>Pinus rigida</i> (Pitch Pine) <i>Pinus virginiana</i> (Virginia Pine) <i>Pinus pungens</i> (Table Mountain Pine) <i>Picea abies</i> (Norway Spruce) <i>Acer saccharum</i> (Sugar Maple) <i>Acer rubrum</i> (Red Maple) <i>Quercus rubra</i> (Northern Red Oak) <i>Quercus velutina</i> (Eastern Black Oak) <i>Quercus coccinea</i> (Scarlet Oak) <i>Quercus prinus</i> (Chestnut Oak) <i>Betula alleghaniensis</i> (Yellow Birch) <i>Betula lenta</i> (Sweet Birch) <i>Betula papyrifera</i> (White Birch) <i>Fagus grandifolia</i> (American Beech) <i>Fraxinus Americana</i> (White Ash) <i>Fraxinus pennsylvanica</i> (Green Ash) <i>Tilia americana</i> (Basswood) <i>Liriodendron tulipifera</i> (Tulip Tree) <i>Carya ovata</i> (Shagbark Hickory) <i>Ulmus Americana</i> (American Elm) <i>Populus grandidentata</i> (Big-tooth Aspen) <i>Nyssa sylvatica</i> (Black Gum) <i>Juglans nigra</i> (Black Walnut) <i>Prunus serotina</i> (Black Cherry) <i>Magnolia acuminata</i> (Cucumber Tree) <i>Morus alba</i> (Mulberry).</p>	

Sassafras albidum (Sassafras)

1.2.2 FSC Product Classification

Timber products		
Product Level 1	Product Level 2	Species
W1	W1.1 (Roundwood Logs)	See Above
W1	W1.2 (Fuelwood)	See Above
Non-Timber Forest Products		
Product Level 1	Product Level 2	Product Level 3 and Species
No Commercial Products		

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	1,060,272.27 acres are afforded varying levels of protection. Strict reserves include State Forest Natural areas - 79,189.55 acres. File Reference: DCNR_Management_Zoning.xml
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High Conservation Value Forest/ Areas

High Conservation Values present and respective areas: Units: ha or ac

	Code	HCV Type	Description & Location	Area
<input checked="" type="checkbox"/>	HCV1	Forests or areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	Wild Plant Sanctuaries Ecological Focus Areas File Reference: HCVF_Areas_2013-copy.xls	1.1= 9,467.2 1.2 = 34,717.69
<input checked="" type="checkbox"/>	HCV2	Forests or areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.	Wild Areas Natural Areas > 2,000 Acres Wild Areas Natural Areas > 2,000 Acres William Penn SF Parcels Four Corners	2.1 = 136,462.10 2.2 = 159,277.18
<input checked="" type="checkbox"/>	HCV3	Forests or areas that are in or contain rare, threatened or endangered ecosystems.	Old Growth ROS Primitive Areas >500ac	3.1 = 19,454.44 3.2 = 21,644.15 3.3 = 954.5

			S1 Natural Communities	
<input checked="" type="checkbox"/>	HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	Public Drinking Water DEP Buffers. Critical Floodplain	4.1 = 7,432.03 4.2 = 7,432.03 4.3 = 95.81
<input type="checkbox"/>	HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).	None Identified	
<input checked="" type="checkbox"/>	HCV6	Forests or areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).	PHMC Archaeological PASS Data	268.12
Total Area of forest classified as 'High Conservation Value Forest/ Area'				<u>Total – 208,855.46</u> *Note: This is not a sum of all above acres. These areas may duplicate or overlap boundaries. This number is an exact representation of the acres set aside. Acres are subject to change annually as these boundaries may change due to data entry methods and refinement of coarse data.

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

<input type="checkbox"/>	N/A – All forestland owned or managed by the applicant is included in the scope.
<input checked="" type="checkbox"/>	Applicant owns and/or manages other FMUs not under evaluation.
<input type="checkbox"/>	Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification.
Explanation for exclusion of FMUs and/or excision:	The DCNR BOF is currently in possession of 6 properties where timber rights were reserved for a period of time by the seller. The BOF also has one Nursery and one golf course. These properties are excluded from the scope of the certificate. DCNR Bureau of Forestry occasionally arranges harvests for other state agencies that are not certified (e.g., Bureau of State Parks). Procedures require that contracts

	<p>specify “Not FSC-certified” for such sales.</p> <p>At this time no areas have been excised. Note: As part of the DCNR BoF Approach to Excision (2011) the FME is undergoing and analysis to excise acres where subsurface rights are owned by another entity and development is occurring. This analysis is underway and should be ready for implementation in 2014.</p> <p>File References: BOF Approach to Excision.docx Acres_Removed_From_Certification.xml</p>																																											
<p>Control measures to prevent mixing of certified and non-certified product (C8.3):</p>	<p>The FME does not sell certified timber mixed with non-certified timber. Certified sales are designated with the FSC claim and COC code on the first page of the contracts. For uncertified gas pad clearings and related conversions, “BF16 Invoices” with no COC information are used.</p> <p>File References: FMT-4.doc Chain-of-Custody Guidelines ver7-30-13.docx</p>																																											
<p>Description of FMUs excluded from or forested area excised from the scope of certification:</p>																																												
<p>Name of FMU or Stand</p>	<p>Location (city, state, country)</p> <p>Size (<input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac)</p>																																											
<table border="1"> <thead> <tr> <th>District</th> <th>Acreage</th> <th></th> </tr> </thead> <tbody> <tr> <td>11</td> <td>2770.13</td> <td>excluded due to timber reservations</td> </tr> <tr> <td>11</td> <td>2151.71</td> <td>excluded due to timber reservations</td> </tr> <tr> <td>11</td> <td>1127.04</td> <td>excluded due to timber reservations</td> </tr> <tr> <td>11</td> <td>3044.33</td> <td>excluded due to timber reservations</td> </tr> <tr> <td>4</td> <td>2363.41</td> <td>excluded due to timber reservations</td> </tr> <tr> <td>11</td> <td>5061.77</td> <td>excluded due to timber reservations</td> </tr> <tr> <td>1</td> <td>61.25</td> <td>Excluded due to being a Golf Course</td> </tr> <tr> <td>Penn Nursery</td> <td>325</td> <td>excised because it is not part of a forest mgt</td> </tr> </tbody> </table>	District	Acreage		11	2770.13	excluded due to timber reservations	11	2151.71	excluded due to timber reservations	11	1127.04	excluded due to timber reservations	11	3044.33	excluded due to timber reservations	4	2363.41	excluded due to timber reservations	11	5061.77	excluded due to timber reservations	1	61.25	Excluded due to being a Golf Course	Penn Nursery	325	excised because it is not part of a forest mgt	<table> <tbody> <tr> <td>Dalton, PA, US</td> <td>2770.13</td> </tr> <tr> <td>Dalton, PA, US</td> <td>2151.71</td> </tr> <tr> <td>Dalton, PA, US</td> <td>1127.04</td> </tr> <tr> <td>Dalton, PA, US</td> <td>3044.33</td> </tr> <tr> <td>Laughlintown, PA, US</td> <td>2363.41</td> </tr> <tr> <td>Dalton, PA, US</td> <td>5061.77</td> </tr> <tr> <td>Fayetteville, PA, US</td> <td>61.25</td> </tr> <tr> <td>Spring Mills, PA, US</td> <td>325</td> </tr> </tbody> </table>	Dalton, PA, US	2770.13	Dalton, PA, US	2151.71	Dalton, PA, US	1127.04	Dalton, PA, US	3044.33	Laughlintown, PA, US	2363.41	Dalton, PA, US	5061.77	Fayetteville, PA, US	61.25	Spring Mills, PA, US	325
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property		
		16,904.64

1.4 Social Information

Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):	
677 male workers	104 female workers

1.5 Pesticide and Other Chemical Use

FME does not use pesticides.

2012 PA DCNR Pesticides Used

Acid Blue #9, Acid Yellow #23

Lake Colorant

Alkylaryl polyoxykane Ether, Isopropanol and Free Fatty Acids

Chemsurf 90

alpha-hydro-omega-hydroxypolyoxyethylene esters of aliphatic acids, alkylaryl sulfonic acids

Arborchem Clean Cut Oil

Ammonium salt of imazethapyr (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid

Slay

Basal Mineral Oil

Basal Mineral Oil

ethoxylated fatty amines, fatty alcohols, polyethylene glycols

Aquifact

glyphosate, isopropylamine salt

Accord Herbicide

glyphosate: N-(phosphonomethyl)glycine, dimethylamine salt

Accord XRT II

glyphosate: N-(phosphonomethyl)glycine, isopropylamine salt

Accord Concentrate

Accord XRT

Aqua Neat

Glyhomate 41

Glypro Plus

GlyStar Plus

Honcho Plus

Mad Dog Plus

<p>Rodeo</p> <p>Roundup Original</p> <p>Isopropylamine salt of Imazapyr(2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)</p> <p>Arsenal</p> <p>Arsenal Powerline</p> <p>Polaris</p> <p>Stalker</p> <p>Metsulfuron methyl, Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]-carbonyl]amino]sulfonyl]bezoate</p> <p>Escort XP</p> <p>Paraffin oil blend; Emulsifier/surfactant blend</p> <p>Thinvert RTU</p> <p>picloram: 4-amino-3,5,6-trichloropicolinic acid, potassium salt</p> <p>Tordon K</p> <p>proprietary blend of polyalkyleneoxide modified polydimethylsiloxane and nonionic surfactants</p> <p>Kinetic surfactant</p> <p>Sethoxydim: 2-[1-(ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one</p> <p>Poast Plus</p> <p>Sulfometuron methyl {Methyl 2-[[[(4,6-dimethyl-2-pyrimidinyl)amino]-carbonyl]amino]sulfonyl]benzoate}</p> <p>Oust</p> <p>Oust Extra</p> <p>Oust XP</p> <p>triclopyr: 3,5,6-trichloro-2-pyridinyloxy acid, butoxyethyl ester</p> <p>Garlon 4</p> <p>Garlon 4 Ultra</p> <p>Pathfinder II</p> <p>Tahoe 4E</p> <p>triclopyr: 3,5,6-trichloro-2-pyridinyloxy acid, triethylamine salt</p> <p>Garlon 3A</p> <p>Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro</p> <p>Milestone</p> <p>Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro; Triethylamine salt of [(3,5,6-trichloro-2- pyridinyl)oxy] acetic acid)</p> <p>Milestone VM</p> <p>Milestone VM Plus</p>				
Commercial name of pesticide / herbicide	Active ingredient	Quantity applied annually (kg or lbs)	Size of area treated annually (ha or ac)	Reason for use

See Above List	See Above List (active ingredient in bold)	As viewed by the auditor, details are available by project in the Forestry Intranet Database. The database is too large and complex to easily summarize quantities.	5,782 a. in 2012	Primary purposes: Site preparation for tree planting, release of natural regeneration, control of invasive species.
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1.6 Standards Used

1.6.1 Applicable FSC-Accredited Standards

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

1.7 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

<p>Pertinent Regulations at the National Level</p>	<p>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</p>
<p>Pertinent Regulations at the State / Local Level</p>	<p><i>Pennsylvania:</i> PA Fish commission, PA Game commission, and PA DEP. Conservation and Natural Resources Act Article I, section 27 of the Pennsylvania Constitution - Natural Resources and the Public Estate</p> <p>Title 17 of the Pennsylvania Code contains the regulations and statements of policy of the Department. They are as follows: Chapter 1. General Provisions Chapter 11. State Recreation Areas-General Provisions Chapter 15. Transfer or Exchange of State Park Land-Statement of Policy Chapter 17. State Park Natural Areas-Statement of Policy Chapter 21. State Forests-General Provisions Chapter 23. State Forest Picnic Areas Chapter 25. Transfer or Exchange of State Forest Land-Statement of Policy Chapter 27. State Forest Natural Areas-Statement of Policy Chapter 29. Campsites-Statement of Policy Chapter 41. Rivers Conservation-Statement of Policy Chapter 43. Prevention of Railroad-Caused Forest Fires</p>

	Chapter 45. Conservation of Pennsylvania Native Wild Plants Chapter 47. Drilling Water Wells Chapter 51. Snowmobile and All-Terrain Vehicle Registration and Operation Chapter 61. Land and Water Conservation Fund-Statement of Policy
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Regulatory Context Description

Article I, section 27 of the Pennsylvania Constitution was adopted in 1972 and encompasses two basic principles. First, Pennsylvanians have a right to a decent environment, and second, Pennsylvania government has a trusteeship responsibility to protect that environment on behalf of future generations. The statute that creates the Department of Conservation and Natural Resources (DCNR), as well as the statutes that the Department is charged with administering, implement this amendment.

The Department of Conservation and Natural Resources was created by the act of June 28, 1995 and took effect July 1, 1995 (P.L. 89, No. 18) (71 P.S. §§ 1340.101-1340.1103), known as the Conservation and Natural Resources Act or Act 18. The legal authority that establishes the use and control of state forest land is contained in the Conservation and Natural Resources Act, Section 302 Forests. The purpose of the Act, as stated in § 1340.101, is to create a department to serve as a cabinet-level advocate for State parks, forests, rivers, trails, greenways and community recreation and heritage conservation programs to provide more focused management of the Commonwealth's recreation, and natural and river environments.

County and local regulations are part of the regulatory landscape and are relevant, but do not typically play a prominent role as compared to state and federal regulations.

2.1.2 Environmental Context

Environmental safeguards:
DCNR has developed a multi-level approach for protecting the environment when conducting forest management operations and leasing state forest and park lands for oil and natural gas exploration and development. First-level environmental safeguards involved the establishment of DCNR Management Zones which include “non-development” areas, such as state parks and state forest wild and natural areas where timber harvests are not usually conducted and no surface activity is permitted. Buffer zones have also been developed to protect areas of ecological, recreational, and aesthetic importance, such as water bodies, roads, trails, and buildings. Second-level safeguards are site-specific, such as Pennsylvania Natural Diversity Inventory (PNDI) searches, timber harvest proposal procedures, and well spacing and road and pipeline construction specifications. These specifications are contained in department handbooks and the Oil and Gas Lease for State Forest and Park Lands and are administered on the ground by the Bureau of Forestry’s District Foresters. Third-level environmental safeguards involve Department of Environmental Protection (DEP) regulations—all operators must comply with DEP laws and regulations. These laws and regulations are solely administered by DEP. (Adapted from PA DCNR publications.)
Management strategy for the identification and protection of rare, threatened and endangered (RTE) species and their habitats:
In Pennsylvania, four different agencies have the primary responsibility for administering the program for protection and management of threatened and endangered species and other species of special

concern. The **Pennsylvania Fish and Boat Commission** is responsible for fish, reptiles, amphibians, and aquatic organisms. The **Pennsylvania Game Commission** is responsible for wild birds and mammals. The **Department of Conservation and Natural Resources** is responsible for preserving the Commonwealth's native wild plants, terrestrial invertebrates, significant natural communities and geologic features. And lastly, the federal **U.S. Fish and Wildlife Service** is responsible for federally listed, proposed and candidate species under the Federal Endangered Species Act.

In accordance with 25 Pennsylvania Code 9.314 the State has undertaken the responsibility of identifying, locating and protecting the threatened and endangered species of the State. The lists of rare, threatened, endangered, vulnerable and special concern species are defined in 17 Pennsylvania Code 45.11 et al. Procedures set forth in 25 Pennsylvania Code 245.231 and 232 must be followed in the preparation of Environmental Assessments. Pennsylvania Code 89.74 identifies procedures that must be undertaken to avoid impacts to protected species. The Pennsylvania Acts and Statutes pertaining to the protection of Federal and State threatened and endangered species are administered by the Pennsylvania Department of Conservation and Natural Resources through the Pennsylvania Natural Diversity Index which is responsible for all flora and invertebrate fauna, the Pennsylvania Fish and Boat Commission which is responsible for aquatic and herptile fauna and the Pennsylvania Game Commission which monitors terrestrial fauna, birds and mammals.

The Pennsylvania Natural Heritage Program (PNHP) is a partnership between the Department of Conservation and Natural Resources, Western Pennsylvania Conservancy, Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission and the U.S. Fish and Wildlife Service. PNHP conducts inventories and collects data regarding the Commonwealth's native biological diversity.

Information is stored in the PNDI integrated data management system consisting of map, manual, and computer files. This PNDI information system is continually refined and updated to include recently discovered locations and to describe environmental changes affecting known sites. The goal is to build, maintain, and provide accurate and accessible ecological information needed for conservation, development planning, and natural resource management. (Adapted from PA DEP publication: *Frequently Asked Questions- Protecting Threatened and Endangered Species And Species of Special Concern.*)

2.1.3 Socioeconomic Context

The Bureau of Forestry employs over 500 people, including over 80 managers, nearly 200 professional and technical staff (foresters, technicians, program specialists, etc); 55 clerical and administrative personnel, 33 forest rangers, 23 wildfire specialists, and 134 maintenance personnel. The BOF also employs 285 seasonal staff. The forests managed by the BOF provide additional employee opportunities in local communities and with associated industries. Recreation is a major use of state forests and supports local community interests and economic opportunities as well as providing tourism that draws visitors from great distances. Diverse recreation opportunities are maintained on the state's forests and a monitoring system is utilized to support quality user, visitor and stakeholder experiences. The state forests' mission emphasizes "low-density" recreation and opportunities for motorized and non-motorized recreation are provided. The BOF also oversees 4,000 leased campsites that provide an annual income to the Commonwealth of approximately \$800,000. The recent Marcellus shale activity

has significant socioeconomic impacts, including impacts to jobs and employment opportunities, changes in recreation experiences, and increased conflicts between diverse stakeholders and forest users. The BOF provides public education and outreach to support forestry and knowledge of forestry in the state with significant information provided online, through publications and maps, and on-site interpretive projects. The BOF is aware of the socioeconomic impacts of management planning and operations and actively monitors conditions and seeks input from partners and stakeholders. Advisory groups, including the Conservation and Natural Resource Advisory Council (CNRAC), as well as groups related to biological resources, ecosystem management, silviculture, and recreation provide input to the BOF.

DCNR is currently conducting surveys to update information about the economic impact of the forest products industry in Pennsylvania. Pending more recent information, the Pennsylvania Forestry Association made these claims in 2005:

- Pennsylvania is the largest producer of hardwoods in the country, accounting for 10% of the total hardwood output in the US.
- Revenues from Pennsylvania's forest products industry exceed \$5.5 billion annually.
- Approximately 90,000 Pennsylvanians make a livelihood on the industry. Over 10% of the state's manufacturing workforce is involved in the forest products industry.
- There are over 3,000 separate businesses involved in the forest products industry, with a presence in every county of the Commonwealth.
- More than half of Pennsylvania - about 17 million acres - is forest.
- The majority of Pennsylvania's forests, about 70%, are privately owned, including 5% held by forest products companies. Approximately 30% of the forests are government owned. 13% is in DCNR State Forests.

2.1.4 Land Use, Ownership, and Land Tenure

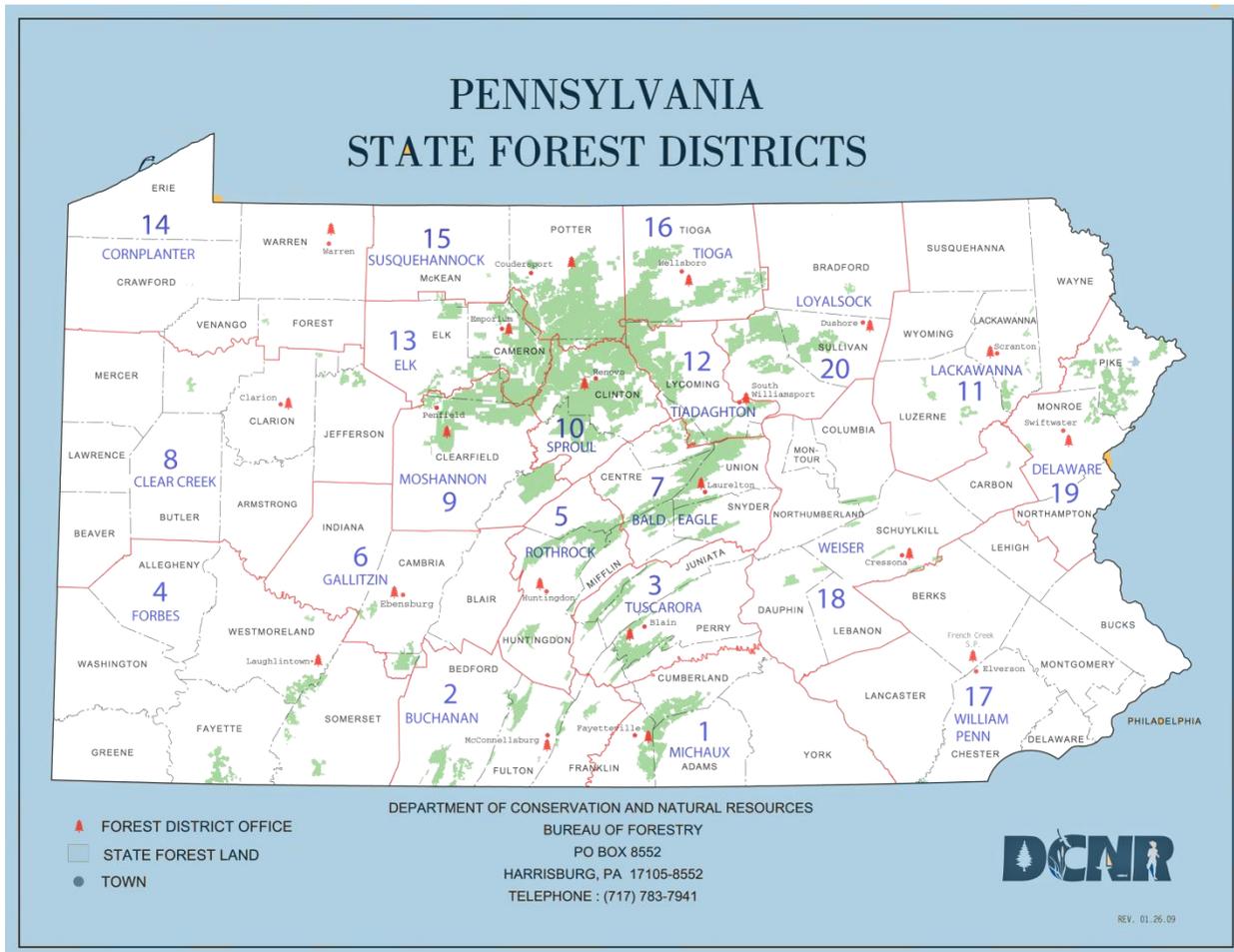


Figure 1

According to Article 1, Section 27 of the Pennsylvania Constitution, "Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

As stated in the Regulatory Context section of this report, the Pennsylvania Department of Conservation has the authority to manage the state's forest lands. DCNR is comprised of eight Bureaus, of which the Bureau of Forestry (BOF) is mandated "to ensure the long-term health, viability and productivity of the Commonwealth's forests and to conserve native wild plants." The State Forest is managed by the Bureau of Forestry in the Department of Conservation and Natural Resources.

The state forest system of Pennsylvania—2.2 million acres in 48 of 67 counties (Figure 1) – comprises 13 percent of the forested area of the Commonwealth. 85% of the land is owned by the state in fee simple, which includes both surface and subsurface ownership. On the other 15%, the state only has surface rights and is working on Surface Use Agreements with those that hold the subsurface rights. BOF has leased rights to third parties for conditional use of some of the resources contained within the state

forest. These include agreements for timber sales, campsites, gas exploration and development, coal prospecting and extraction, stone extraction, and water use.

2.2 Forest Management Plan

Management Objectives:

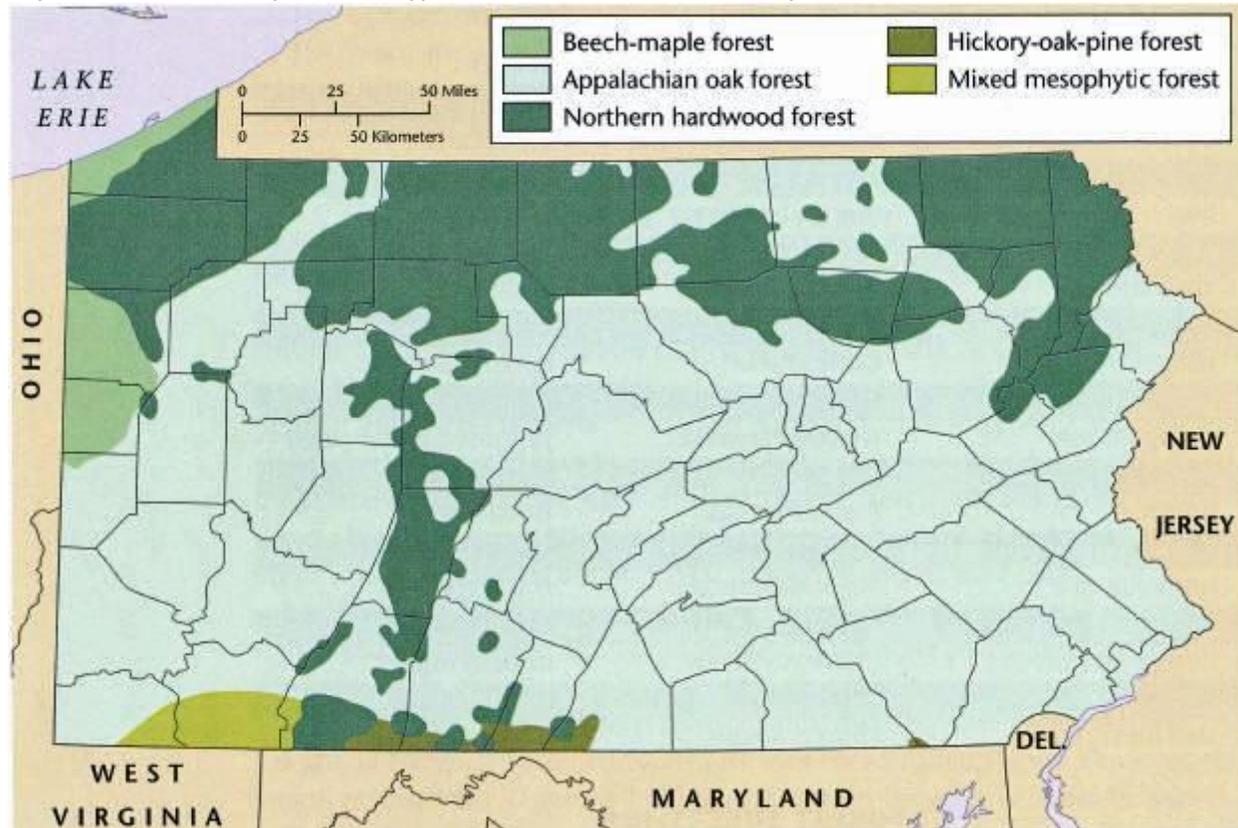
From the BOF's 2007 FMP:

1. To promote and maintain desired landscape conditions.
2. To maintain and develop naturally reproducing forest communities.
3. To provide economic and social benefits through a sustained yield of forest products.
4. To determine appropriate, sustainable timber harvest levels.
5. To demonstrate and promote silvicultural practices that sustain ecological and economic forest values.

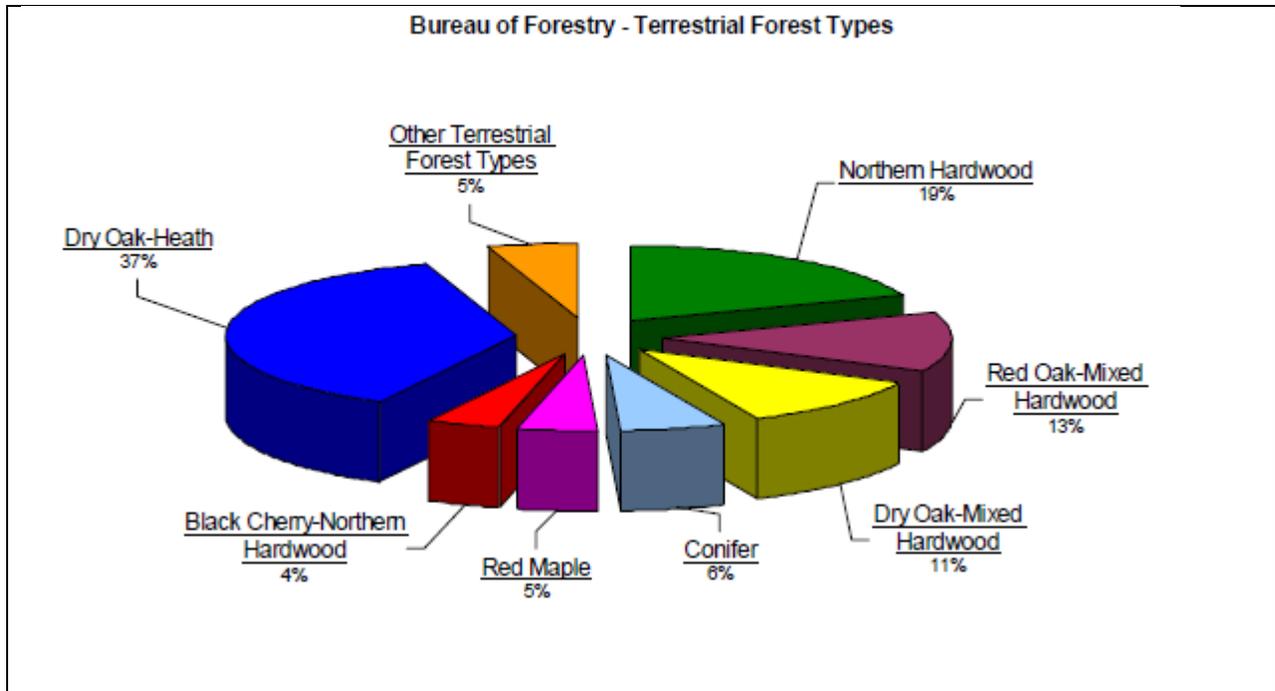
Several objectives for specific goals are outlined in the publicly available 2007 FMP.

Forest Composition and Rationale for Species Selection:

There are over 100 tree species in the State of Pennsylvania. Geology (topography, soils) and climate determine the forests types, which are highly detailed in the 2007 FMP. A mix of conifers and hardwoods are harvested. Species for harvest are selected primarily for their current mix of uses; however, certain species may be culled or retained as necessary to achieve growth or regeneration objectives. A summary of forest types for the entire state forest system is as follows:



The University of Pennsylvania Press, 2005



General Description of Land Management System(s):

Both even- and un-even aged management systems are used, and may include intermediate treatments, such as timber stand improvement (TSI), thinnings, and salvage harvests. Common systems used include shelterwood, clearcutting, seed-tree, single tree selection, and group selection among others.

Harvest Methods and Equipment used:

Directional felling is accomplished with chainsaws in cooperation with skidders, forwarders, and other ground-based equipment for extraction.

Explanation of the management structures:

State forest management is administered by the BOF within the DCNR through a cooperative effort involving field staff in 20 Forest Districts located throughout Pennsylvania and a Central Office located in Harrisburg. Staffing in the Forest Districts varies, depending on the size of the state forest and specific circumstances found in the district. Forest Districts are normally staffed by a varying compliment including a District Forester, Assistant District Foresters, Foresters, Forest Rangers, Fire Specialists, Administrative Assistants, Clerical Support, and Maintenance positions. Central Office includes the Director (State Forester), two Assistant Directors, and eight Program Areas, which provide program direction, support and technical assistance to the Forest Districts.

2.3 Monitoring System

Growth and Yield of all forest products harvested:

DCNR in cooperation with Penn State and USDA Forest Inventory Analysis developed product yield tables specifically for Pennsylvania’s state forests. The BOF has about 1,600 permanent plots located on State Forest land as part of its Continuous Forest Inventory (CFI), which are re-measured on a five-year cycle. Individual tree measurements for each plot were used to develop net board feet volume yield estimates. Seven aggregated forest types were identified to facilitate the development of the yield functions. Yield functions were developed for each site class, stocking level and age class for two volume regions. Additionally, four species composition regions were identified for distributing the volume across representative species. The BOF uses a harvest allocation model called WrtLin to develop

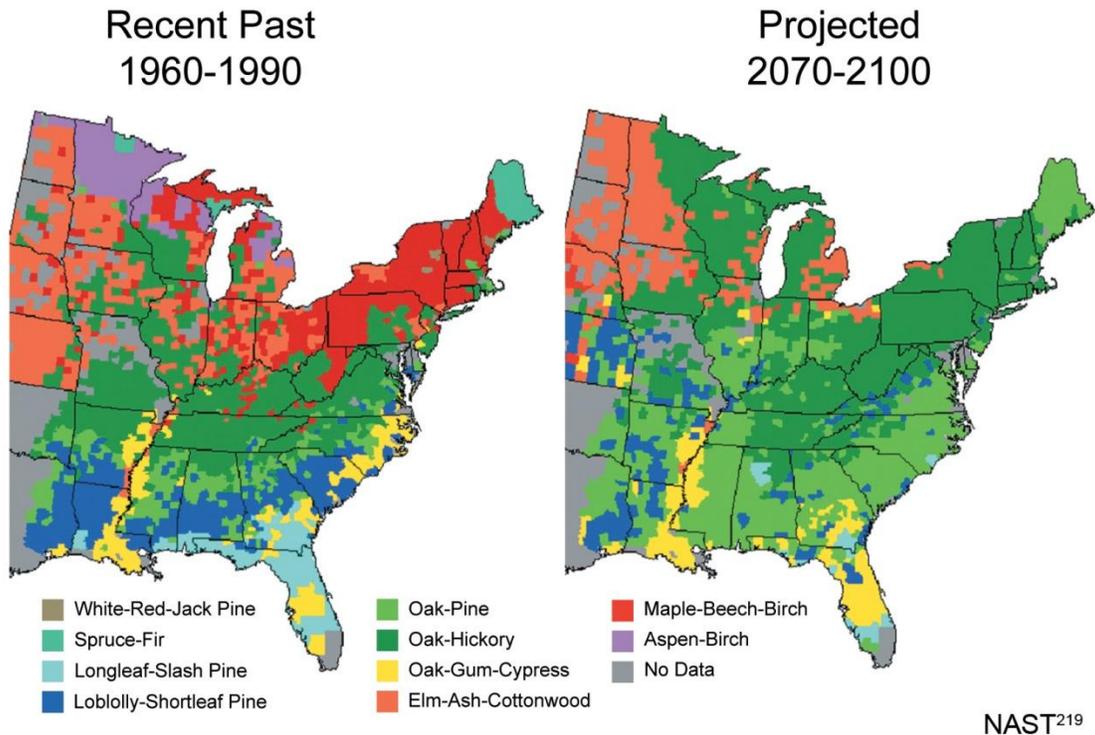
its sustainable long-term harvest allocations. Each forest district is modeled on a variety of desired ending forest condition constraints. Shelterwood and overstory removal treatments are explicitly modeled over a 140- to 150-year planning horizon broken into 10-year planning periods (Lehman and McDill 2002).

Forest dynamics and changes in composition of flora and fauna:

Tracked through the [PNDI integrated data management system](#). This PNDI information system is continually refined and updated to include recently discovered locations and to describe environmental changes affecting known sites.

Invasive species are one of the most significant threats to native ecosystems in the nation. Governor Rendell established the Pennsylvania Invasive Species Council in 2004 to guide and coordinate invasive species prevention and control efforts at the state level. In response, DCNR established an agency-wide Invasive Species Team to develop and implement the DCNR Invasive Species Management Plan.

DCNR also cooperates with the USFS, Penn State, other state, federal and non-governmental organizations to track potential impacts of climate change on flora and fauna (Figure 2).



The maps show current and projected forest types. Major changes are projected for many regions. For example, in the Northeast, under a mid-range warming scenario, the currently dominant maple-beech-birch forest type is projected to be completely displaced by other forest types in a warmer future.²⁴³

Figure 2
<http://nca2009.globalchange.gov/ecosystems>

Environmental Impacts:
<p>The Bureau of Forestry uses a custom, centralized, enterprise-level geographic information management system called the Forest Information Management System (FIMS) to manage spatial and tabular data, monitor forest conditions, produce maps, and conduct spatial analyses of the forest.</p> <p>On initiation of any project in the following categories, a formal written project review, addressing the short-term and cumulative effects of the environmental review items, must be completed by the district forester (or designee) and approved by the state forester:</p> <ul style="list-style-type: none"> • Any wetlands encroachment • In-stream alterations • Disturbance activities in a natural area including insect and disease control • Timber management in a wild area • Right-of-way expansions or new construction (pipelines or major powerlines) • Surface mining, oil and gas leases (excluding gas storage) • Large-scale stone removals • Subsurface disturbance to caves • Addition of public-use roads to the state forest road system • Land acquisitions/exchanges • New trail construction • Large blocks of artificial regeneration, i.e. monocultures (>10 acres) • Wind power development (proposed) • Threatened and endangered plant and animal species and species of special concern • Geologic features • Noteworthy natural communities Other projects as determined by the state forester <p>The Bureau’s gas management approach of avoid, minimize, mitigate and monitor strives to promote environmentally-sound gas exploration that maintains contiguous forests, conserves wetlands, protects threatened and endangered plants and animals, upholds water quality, maintains the forest’s wild character, and provides high quality recreation.</p> <p>Funded in part by oil and gas revenues, the BOF monitoring program focuses on plants, wildlife, water resources, social, and recreational monitoring that includes detecting changes, tracking activities, reporting on the findings, and modifying practices where applicable. The monitoring program is intended to identify impacts to State Forest lands and facilitate adaptive management that addresses those changes.</p> <p>Additional impacts on water and air are monitored by the Pennsylvania Department of Environmental Protection.</p>
Social Impacts:
<p>Examples of PA DCNR Social Impact Monitoring:</p> <p>State Forest Resource Management Plan Public Survey: This survey is part of the public participation process for the 2014 SFRMP revision. Additional opportunities for public input through 2014 will include written comment and public meetings.</p> <p>Pennsylvania Forest Action Plan: The Pennsylvania Forest Action Plan takes an in depth look at the</p>

state's forest resources and was completed as a requirement for the Farm Bill. It is separated into two parts. One is the current assessment of the forest and the other includes the strategies to implement the plan. These documents describe current forest conditions and trends, identify priority issues, delineate important landscapes and propose long-term strategies for achieving sustainability.

PA Bureau of Forestry Monitoring Program - Shale Gas Social Monitoring: Efforts including focus groups, tour surveys, visitor use monitoring and comment cards, USFS Recreation Opportunity Spectrum (ROS) adapted by the Bureau for application in Pennsylvania, ambient noise studies, and viewshed studies.

2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

Summary - Fishing Hunting and Wildlife Survey

http://wsfrprograms.fws.gov/Subpages/NationalSurvey/nat_survey2006_final.pdf

Pennsylvania's Recreation Plan 2004-2008: Executive Summary

This report devises a plan to improve outdoor recreation opportunities throughout the commonwealth of Pennsylvania.

Summary - Recreation Guide

[ExecSummary.pdf](#)

DCNR Outdoor Traveler Study

This study calculates and explains useful market and economic data on Pennsylvania's tourism regions and the impacts outdoor recreation has on the state and regional economies.

Summary - DCNR Outdoor Traveler Study

Pennsylvania Outdoor Recreation Economy Report 2011

Summary - Economic Impact Study

Pennsylvania's Return on Investment in the Keystone, Recreation and Park Conservation Fund

The Economic Impact of Heritage Areas Study

Pennsylvania's Statewide Historic Preservation Plan 2012-2017, Full Report (PDF)

Costs, Productivity, and Efficiency:

Monitoring Examples:

- Annual Pennsylvania BOF Forest Products Statistical Reports
- Annual Oil and Gas Lease Fund Revenue Reports
- State Biennial Budget Process (With a \$136.5 million DCNR annual budget, 22% (\$30 million) comes from the general fund. \$106.5 million is from the Oil and Gas Lease Fund, which consists of rents and royalties from drilling on state forestland.)

3. Certification Evaluation Process

3.1 Evaluation Schedule and Team

3.1.1 Evaluation Itinerary and Activities

26 – August [Figure 3 Audit Route Map - Point A]

FMU/Location/ sites visited	Activities/ notes [Detailed site notes follow this table.]
Main office, Harrisburg, PA	8 a.m. – 5:00 p.m. Opening Meeting: Introductions, client update, review audit scope, audit plan, intro/update to FSC and SCS standards and protocols, review of open CARs/OBS, final site selection, and transport to first state forest.
27 – August [Map Point B]	
FMU/Location/ sites visited	Activities/ notes
Tiadaghton State Forest 10 Lower Pine Bottom Road Waterville, PA 17776	10:00 a.m. - Arrive at D-12 office (meet and greet, district background with focus on oil and gas leasing issues) 11:00-5:30 p.m. - Tour of district sites
28 – August [Map Point C]	
FMU/Location/ sites visited*	Activities/ notes
Moshannon State Forest 3372 State Park Rd Penfield, PA 15849	8:00 a.m. Arrive at D-9 office (meet and greet, district background) 11:00-5:30 p.m. - Tour District Sites
29 – August [Map Point D]	
FMU/Location/ sites visited	Activities/ notes
Elk State Forest 258 Sizerville Road Emporium, PA 15834	8:30 a.m. Arrive at D-13 (meet and greet, district background) 11:00-5:30 p.m. Tour District Sites
30 – August [Map Point E]	
FMU/Location/ sites visited	Activities/ notes
Cornplanter State Forest 323 North State Street, North Warren, PA 16365	8:30 a.m. Arrive at D-14 (meet and greet, district background) 9:00-11:00 a.m. Tour D-14 Sites
	11:00 a.m. – 12:15 p.m. Closing Meeting Preparation: Auditors take time to consolidate notes and confirm audit findings 12:15 – 1:30 p.m. Closing Meeting and Review of Findings: Convene with all relevant staff to summarize audit findings, potential non-conformities and next steps.

Site Notes – Pennsylvania State Forest FSC Re-Certification Audit

August 27, 2013 – Tiadaghton State Forest

Site 1: Scenic Forest Overview. Managing viewshed quality is a critical aspect of regulating oil and gas development. Vista includes forested low mountains (about 2,500 feet in elevation) and Pine Creek in the valley. Oil drilling rigs are visible on crest, but once wells are in, the rigs are removed. Permitting for the well in the distance included a requirement for Allegheny Woodrat (a PA Threatened mammal) habitat improvement on the rocky outcrops on the slope. The improvement involved daylighting of known habitat locations by removing trees.

Site 2: Operating Oil and Gas Well Pad. Size of well pads is usually limited to 4-6 acres, but this one may be about 9 acres. They are located on level land and covered with crushed rock (approximately 400 truckloads of rock per pad) and look like a parking lot. Various gas pipes and valves are grouped near the center of the area along with a compressor station, water extractor and electrical generators that burn gas. There is some noise from the machinery, but the decibel levels are regulated. The pads have a gate at the entrance to prevent vehicle entry, but they are not otherwise fenced. Public access is not restricted, but safety notices are posted.

Site 3: Water Impoundment for hydraulic fracturing (“fracking”). 15,000,000 gallon, white plastic-lined pond about 12-15 acres in size. The water is piped up the mountain after being drawn from the creek, stored in the impoundment until needed, and then piped or trucked to well-drilling sites. Well drilling requires about 1,000 semi-trailers tanks of water, and so the impoundment saves road wear and reduces traffic problems. Pumping from the creek is cut off during low flow per Dept. of Environmental Protection permit limits. Site is fenced to minimize drowning hazards for people and wildlife. The water is about 15’ deep lined with a plastic liner. The liner has a rougher portion that runs around the rim of the impoundment to allow wildlife to get traction to crawl out of the pond. Site 4: Large, gravel pad with two big compressors that compress gas before transferred to the Trans America pipeline. Noise from the compressors is 50 decibels 100 feet from the compressors.

Site 5: Kyles Ridge Timber Sale. 238 acre overstory removal. The oak forest was suffering significant mortality due to gypsy moth feeding and drought effects, but desirable regeneration was fairly well established in three patches, which were fenced to keep out deer. Reserves include 10-15 ft² basal area of oaks and other preferred species, including good wildlife den trees. Three-hundred foot buffers covering about 26 acres to protect the view along roads and trails. Supplemental planting of white pine and pitch pine was done. No BMP issues were observed.

Site 6: Preserve II Timber Sale. 205 acre harvest plus 39acre road buffer. Like the preceding site, an overstory removal was conducted post gypsy moth defoliation. Audit team walked a quarter mile through the logging slash to view better natural regeneration in a fenced block. Reserved trees include white oak, chestnut oak and all conifers. The logger on this job (a firewood processor) was fined triple damages for taking unmarked trees from a stream buffer. Site discussion included frequency of regeneration monitoring surveys, use of SILVAH software, recent timber drain survey and other topics.

August 28, 2013 – Moshannon State Forest

Site 1: Tank Farm. About 50 large silo-type green tanks are used to offload fracking water that is brought in by truck. From here, the water is piped to drilling sites (reducing truck traffic up the mountain). Tanks can also be used to hold flow-back water from gas wells. Toxic flow-back water becomes contaminated with very high levels of sodium and heavy metals. It is initially re-used for fracking, but eventually trucked away for deep-well injection disposal somewhere in Ohio.

Site 2: Forest Seed Orchard. Non-native European larch is being replaced with red pines. Except for Norway spruce, state nurseries are no longer producing non-native species

Site 3: Kahler Cabin Site. This is one of about 4,000 cabin leases on State Forest lands. Cabin sites are 100' x 100'. Buildings are typically modest wood or stone structures, mostly one-story. Running water and certain other improvement are prohibited. Paint colors are regulated. Lessee pays \$200/year for site. No new cabin leases have been issued since 1970. A nearby newly-completed snowmobile trail had been upgraded from a logging skid road as a requirement for a gas company to access severed subsurface rights for drilling.

Site 4: USFS Oak Regeneration Research. 96acre track divided into blocks of various treatments to study optimal oak seedling survival. Overstory had been recently removed. Reserve trees are evenly distributed on a grid for research purposes. Site is fenced to limit deer browsing. Forest now has 52 fenced sites, down from a peak of 120 sites when deer population was causing extreme regeneration failures.

Site 5: Lower McGeorge Road. Gas company was required to build a snowmobile trail that runs along the side of an improved forest road. Five pipes carrying gas or water run under the ROW. Gas company agreed to pile rocks along the edge of the ROW to serve as rattlesnake shelter. State has a \$600,000 study of rattlesnakes in progress as part of the gas and oil program monitoring. Auditors inspected a check-off sheet for monitoring well drilling and noted mailboxes that contain DEP's E&S (erosion and sedimentation) plans.

Site 6: Stone Camp on McGeorge/Wallace Mine Road. Cabin site where a spring had been polluted by flow-back water that was accidentally released at an adjacent gas well site. Gas company provided bottled water for one year until testing showed water was safe. Cabin lessee has sued the gas company for additional damages.

Site 7: Energy Corporation of America Compressor Site. Gas compressor station powered by three-phase electric lines is quieter than sites that generate power from gas engines. State Forest O&G Forester helped design the compressor station layout based on his oil and gas training in the military. Team had a discussion about the efficiency of using electricity that originates from a coal-fired power plant rather than on-site natural gas. Permit for compressor site included a requirement to protect an adjacent rattlesnake gestation den and sunning rock.

Site 8: Billotte Removal Timber Sale. 198acre harvest divided into five shelterwood blocks and seven overstory removal blocks. Hand cutting with log removal by a forwarder resulted in a careful logging job. Visited portions of sale showed excellent oak and other hardwood regeneration. Before the timber sale will be closed out, a dozer will reclaim the skid roads by dressing minor ruts. A discussion ensued about whether DCNR has measurable rutting standards – apparently it does not. Definition of acceptable rutting is subjective, with inconsistency between foresters.

Site 9: Active Harvest Logger Interview. Audit team had a private discussion with the on-site operator. He expressed pride in the quality of his workmanship. SFI safety training certificate and Erosion and Sedimentation Permit were posted on-site. Logger said he experiences fairly consistent reviews from State Foresters. This site had been inspected three times by the forester in charge of sale administration. Logger showed auditors his spill kit and described the training he has received. He was equipped with proper PPE. Discussion also covered ups and downs of timber markets and the challenge of making a living. Concern was expressed about State DOT Excessive Use fees for road damage by log trucks. To prevent damage, PennDOT has posting and bonding policies that requires haulers to be financially responsible for excess maintenance on the roads they use. There is a perception (repeated in interviews with DCNR staff) that gas companies are not paying for their share of road damage caused well-drilling/support trucks and that costs are being shifted to loggers.

Site 10: Rattlesnake Pike Timber Sale. 350 acre salvage shelterwood operation following gypsy moth defoliation. The understory was sprayed with Oust to clear fern competition. White pines and red pines have been hand planted to supplement native hardwoods. Cutting instructions were to remove all dead oak and live maple trees. Oak residual will likely be better on lower slopes that were less affected by drought, but ridge is coming to more aspen-maple-pine. Site will be eventually retyped based on reproduction success. Foresters talked about whether red pine is a desirable choice on the soil. Discussion followed about harvest allocation model (described as area control model with volume constraints influenced by plan goals). Foresters and auditors are concerned about whether regeneration success rates will be reflected in the sustainable harvest levels predicted by the growth model.

Site 11: Smay's Trail Salvage Timber Sale. 345 acre - salvage shelterwood (two-aged removal) after gypsy moth defoliation). Lower-quality, mostly dead pole stand that will be cut for pulpwood (not yet harvested). The timber has been sold to an Amish crew. The Amish can get a waiver from using safety equipment for religious reasons with a letter signed by a religious leader. Cutting will be done with a processor to minimize risk from deadfalls. Bigger dead oaks will be left for wildlife dens. Site will be planted after harvest. Wildlife Biologist Emily Just defended choice of pine for planting based on benefits to species of greatest conservation need as described in the Wildlife Action Plan.

Site 12: Strawband Beaver Road Timber Sale. 287 acre harvest, mostly overstory removal after gypsy moth related mortality. Better living oaks were marked to keep. Decent oak regeneration is present. Road buffer will be maintained with higher residual basal area. Stream and wetland buffers were marked out. Use of grapple skidder won't be allowed during growing season to protect seedlings. There was a discussion about oak wilt prevention, but that disease is not common in the area and so there are no seasonal cutting restrictions. Site is sold and ready to cut.

August 29, 2013 – Elk State Forest

Site 1: Chemical Storage Room at Maintenance Shop. Auditors inspected locked pesticide storage room. Chemicals are kept in a metal cabinet, also locked. A water flush basin for face and eyes was located in the room. MDS sheets are posted on a bulletin board in an adjoining room.

Site 2: Hicks Run Elk Viewing Station. A shelter has been built on the edge of an open field frequented by re-introduced elk. Food plots attract elk. Interviewing indicated that a thousand or more people will visit the shelter most evenings during the rut. Site is designed to accommodate large numbers of people. Trails, plantings and fences are intended to keep viewers separate from elk. Site has nice interpretive kiosk panels. State Forest employees are on duty four nights per week during the peak viewing season.

Elk State Forest supports the majority of an 800-850 elk population that was reestablished 100 years ago.

Site 3: Pine Tree Camping Area. Primitive no-fee camp area (not defined as a campground) with about 15 camp sites. The site is adjacent to an old homestead “natural area” that includes a self-guided nature trail with 38 stops. Camp is popular with cold-water anglers that fish in the stream.

Site 4: Aspen Clearcut. About 90 acres. The site was chainsaw cut by forest staff (including Game of Logging training), with cut stems left to decay since there was no market for the wood. The objective is to regenerate aspen for wildlife purposes. The site has an electric fence to keep out the elk and deer, which were causing excessive browsing. Short-term electric fences are installed by forest staff. Longer-term woven wire fencing is contracted out.

Site 5: Mowed Food Plot. Small hayfield mowed and maintained for elk.

Site 6: Ichabod Timber Sale. 188 acre marked shelterwood harvest, not yet cut. The site was sprayed with Oust and Accord in 2007 to knock out ferns. The understory is essentially barren due to browsing and site prep work. Harvest target is to leave 70-80 ft² of basal area as seed source. The prescription is based on results from running the SILVAH cruise software, with plot data collected via a hand-held data recorder. Interviewing shifted to bond requirements. Percentage-wise, timber sale bonds are higher on smaller sales, which have a higher default rate. The PA Dept. of State has an online database that tracks contractors who default.

Site 7: Strip Mine Reclamation. An 1860 coal mining site that had deep mines and some strip mining. A steep, high wall bank was graded back and reseeded. At the base of the hill, two water filtration ponds were installed to reduce the acid content (increase the pH) of water flowing from the deep mine shafts. The ponds use a combination of limestone and mushroom mulch to improve pH. The site is managed in cooperation with the PA DEP.

Site 8: Marked Shelterwood Harvest at Strip Mine. The sale is composed of two blocks, 79 acres and 42 acres in size. They were treated with Oust for fern control one month ago. Trees to save are marked in blue, to leave 50-80 ft² basal area per the Silva software prescription. Site has good oak regeneration. If it responds to the thinning, an overstory removal may follow within two years. Side discussion explored the state Environmental Review process for forestry operations.

Site 9: Colebank Sale. 170-acre overstory removal harvest, recently completed by Hickman Logging. White oak was the most common tree harvested, and comprises the dense regenerating stand left after the harvest. Part of the harvest site was fenced with electric wire after the shelterwood harvest; the rest of the site was not fenced. Regeneration was more dense and higher where fenced, but also quite healthy outside the fence. Harvest site had recently been closed out; landings were free of logging debris and had been seeded with a clover mix; and water bars were installed on steep skid roads. Construction of water bars was excellent, but spacing was questionable in places.

August 30, 2013 – Cornplanter State Forest

Site 1: Anders Run State Natural Area. The Anders Run Natural area is 96 acres and contains many old-growth white pines and hemlocks, some over 4 feet DBH. Like other timber stands in the upper Allegheny River watershed, the original forest cover was logged sometime in the first two decades of the 1800s. The regrowth is between 200 and 225 years old. The walking trail system is about two miles long,

although some of its footbridges are substandard and scheduled for repair or removal according to the District Forester. Numerous Fish and Game species of concern have been found in the Alleghany River, of which Anders Run is a tributary. An historic residence on the property built in 1841, known as the "Little Stone House", is under consideration for restoration. A discussion was held on site about DCNR's monitoring program for natural areas.

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:	5
D. Total number of person days used in evaluation:	20

3.1.3 Evaluation Team

Auditor Name:	Dr. David Capen	Auditor role:	Lead Auditor, Wildlife Biologist, Ecologist
Qualifications:	Dave is a Professor Emeritus in the Rubenstein School of Environment and Natural Resources at the University of Vermont. His research experiences and expertise are in the areas of wildlife habitat analysis, avian ecology, landscape ecology, biodiversity analysis, GIS and remote sensing, multivariate statistics, and conservation planning and reserve design. He has a B.S.F. degree in Forestry from the University of Tennessee, an M.S. degree in Wildlife Management from the University of Maine, and a Ph.D. in Wildlife Science from Utah State University. He was been a faculty member at the University of Vermont from 1976-2009. David is a Certified Wildlife Biologist, and was formerly a Certified Forester (2002-2008). He has conducted numerous FSC and SFI audits in Massachusetts, Maine, Michigan, Indiana, New York, and Minnesota.		
Auditor Name:	Paul E. Pingrey	Auditor role:	Forest Management Specialist
Qualifications:	Paul Pingrey is a forester with extensive experience in sustainable resource certification and public and private land management. Pingrey retired from the Wisconsin Department of Natural Resources in 2009 after 35 years of service. He served as the DNR Forest Certification Coordinator, Private Forestry Specialist and the Wisconsin Forest Tax Law Supervisor. From 2004 to 2009, he managed certification for 6 million acres of DNR forestry programs. In 2008-2009, Pingrey served on national panels that developed the FSC-US Family Forest Standard and revised the American Tree Farm Standard. For 20 years he worked directly with small woodland owners in six southern Wisconsin counties, including eleven years as the Madison Area Forestry Supervisor. His duties also included state park and county forest operations, property master planning, and environmental impact assessment. He has served in Society of American Foresters leadership positions and was chair of the National SAF Certification Working Group. Pingrey began as an independent auditor for SCS Global Services in 2010 and is an ISO19011 accredited lead auditor for Chain of Custody reviews and forest management reviews. Pingrey received a forest management degree from Iowa State University in 1974 and completed U.S. Forest Service Silviculturist Certification in 1988.		
	In addition to being a member of the audit team, Pingrey prepared this audit report.		
Auditor Name:	Kathryn Fernholz	Auditor role:	Social Auditor

Qualifications:	Kathryn Fernholz is a trained forester and has worked with certification since the late 1990s and served as a FSC auditor over the past 10 years. Kathryn is qualified as a lead auditor with the necessary ISO training and has done FSC certification audits on public, tribal, industrial, and non-industrial lands throughout the United States. Kathryn has been a leader within the forestry community in the Upper Midwest through her service as Chair of the Minnesota Society of American Foresters and her appointment to the Minnesota Forest Resources Council. Kathryn has a B.S. in Forest Resources from the University of Minnesota, College of Natural Resources and also studied at the College of Saint Benedict in St. Joseph, MN and Sheldon Jackson College in Sitka, Alaska.
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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 Comments	
Large sales that have high quality timber and overstory removal cuts are expensive for small operators to bid on.	BOF works to ensure sales are of varying size and that blocks are not sized outside of the range for local and diverse-sized businesses. The audit team visited sites (see site notes) and reviewed documentation for sales of varying sizes and costs. The audit team interviewed contractors to confirm that quality opportunities are provided.
FSC has been a good program for the state forests and for local wood products companies.	No response required
PA had a historic goal of having a park within 25 miles of everyone in PA, and that has been accomplished.	No response required
FSC chain-of-custody companies rely on the state lands for FSC certified supply.	BOF recognizes the socioeconomic impacts of its management, including the impacts of certification on chain-of-custody certified companies.

<p>Road bonding creates financial challenge. DCNR has made efforts to address these issues and understanding of the challenge.</p>	<p>As noted, DCNR is aware of the issues related to road bonding. Future audits should continue to monitor the forest owner's financial ability to implement core management activities, including all those environmental, social and operating costs, required to meet the Standard, and investment and reinvestment in forest management, including roads and bridges.</p>
<p>Glad to see state put land out for leasing and there is plenty of oversight of operations. No reason for land to sit idle when it can generate royalties to the state.</p>	<p>BOF recognizes the diverse impacts of gas development, including both positive and negative potential impacts and attempts to address them in their guidelines, management and monitoring systems.</p>
<p>Traffic from gas development will have long-term negative impacts on outdoor recreation and visitors to the area.</p>	<p>BOF recognizes the diverse impacts of gas development, including both positive and negative potential impacts and attempts to address them in their guidelines, management and monitoring systems. During site visits (see audit team notes under itinerary), SCS found that BOF is attempting to accommodate recreation and upgrade recreational infrastructure for when gas development subsides in some areas. No non-conformance is warranted.</p>
<p>Social Comments</p>	
<p>People take public lands and recreation services for granted. People don't understand what DCNR is doing and their value to the public and interests of user groups.</p>	<p>The FSC standard recognizes the importance of providing public education opportunities. The audit team found that the BOF's communications and information programs are well developed and contribute to increasing public knowledge and understanding of forestry and the services provided by DCNR.</p>
<p>Requiring a database PNDI search as part of a temporary impact/event permitting process could be very limiting in the future.</p>	<p>BOF recently revised their policy related to motorized recreation events to include requiring a PNDI search. Interviews with DCNR staff indicate the agency remains open to working with clubs if the process can be improved, but DCNR is committed to protecting the resource from adverse impacts.</p>
<p>Guidelines that were implemented for motorized events are a big change from process that had been in place.</p>	<p>The modified recreation policy is about one-year old. The policy provides structure and consistency in how events are planned and managed. DCNR will continue to evaluate the impacts of the policy.</p>
<p>BOF needs to develop a new policy for mineral rights owners on public lands.</p>	<p>The auditors reviewed the current approach to managing severed mineral rights, including negotiations on road usage and requirements for related activities (e.g., trail improvements, wildlife habitat, etc). The BOF monitoring program is an important part of managing the impacts of mineral development. No non-conformance is warranted.</p>
<p>BOF's efforts to share their approach and guidelines for managing natural gas development is helping other land managers address the issue.</p>	<p>No response required.</p>
<p>Had the opportunity to comment</p>	<p>BOF has extensive, formal and informal consultation process that are</p>

on planning process in the past and planning to participate in new planning process too.	used in management planning and that are expected to be used in the new management plan updating process.
Good working relationship with BOF for maintaining trails and recreation opportunities.	No response required.
DCNR does a good job to increase public in planning process.	BOF has extensive, formal and informal consultation process that are used in management planning and that are expected to be used in the new management plan updating process.
DCNR has not maintained comparable raises for union and management positions. Starting to address situation with first 1% raise in several years – but more needs to be done still. Managers continue to be compensated for only 37.5 hours per week although they put in more than full-time effort.	Manager pay raises have lagged behind union-covered employees as a result of wage deferrals that occurred after the 2008 recession. As explained by the agency, BOF has no control over manager pay raises, which must be approved by the Governor’s Office and necessary funding allocated through the state budgeting process. Manager pay is an issue across state government. DCNR’s human resources bureau has been heavily engaged in the issue and has been working with the Governor’s Office in finding a solution. In 2013, managers received a total of 2.75% pay raises, in line with union raises. In 2014, manager raises are again set to match union raises, totaling 4.75 percent. A recent DCNR Human Resources pay study found that forest manager pay levels are comparable to those in other states in the mid-Atlantic region.
Environmental Comments	
BOF does an outstanding job managing their state forestland's forest resources.	No response required.
The forest management operation is guided by an excellent plan, built with a good degree of public involvement, and regularly updated to incorporate emerging issues.	No response required.
The state’s forests are being consumed by gas development and the vast conversion of forestlands, wildlife habitats, and water resources.	The BOF has developed guidelines and monitoring systems to help assess, mitigate and minimize impacts. Site visits demonstrated BOF efforts to minimize and mitigate the forestland use change impacts of energy development and the FSC conversion threshold is not being exceeded. A site visit to a mine reclamation site aided in demonstrating the agency’s knowledge and commitment to long-term recovery of landscape conditions. The BOF has implemented water holding systems to minimize the transporting of water and permits restrict usage during low-flow conditions.
Pipelines and right-of-ways are being seeded with grass mixtures that have low wildlife value.	The BOF has prepared recommended seed mixes to be used that include diverse native species. While these may not be preferred browse or cover for game species, these have other ecosystem and wildlife values that have been well documented in BOF management guidelines. No non-conformance is warranted.
Roads are being damaged by	The BOF has developed guidelines and monitoring systems to help

over-weight vehicles and run-off is polluting waterways.	assess, mitigate and minimize road impacts. In some districts, water holding systems have been created to help reduce the number of required truck trips. In respect to roads and bridges, primarily in PennDOT District 2, BOF acknowledges poor condition of some roads and bridges subject to heavy truck traffic from oil and gas development, timber production and other uses. DCNR and PennDOT are diligently working on solutions as evidenced by documentation shared with the auditors, and timber producers have reduced timber sale bid prices to reflect road fees.
Concerns about invasive species, including insects like Emerald Ash Borer and Hemlock Wooley Adelgid.	The BOF forest health specialists actively research, monitor and treat invasive species threats, including invasive insects and diseases.
High Conservation Values Forests (HCVF) have been identified by the BOF and are being appropriately managed.	No response required.
Concerned about deer impacting tree regeneration and the impact on forest sustainability and silviculture practices.	The BOF monitors forest regeneration. With the updating of the management plan, the Bureau’s Harvest Allocation Model will use regeneration and growth data to update sustainable harvest yield calculations.
Gas development is creating forest edge effects that need to be measured in order to be evaluated for cumulative impacts.	The BOF has developed guidelines and monitoring systems to help assess, mitigate and minimize impacts. The monitoring systems include measuring and evaluating cumulative impacts, including potential wildlife impacts.
Rutting guidelines are not in writing and there is significant variability between districts and foresters.	Although rutting was not observed to be a concern in the field during the site visits, the BOF could provide training and more guidance on the collection of applicable BMP information that resource managers are expected to consider (see Observation 2013.2).
BOF is very active in forestry research and incorporates findings into management.	No response required

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	Legal mandates from the state legislature and gubernatorial	

	<p>directives to develop oil and gas leases on State Forests are challenging, but the Pennsylvania Bureau of Forestry is implementing responsible environmental safeguards within its jurisdictional authority.</p>	
P2: Tenure & Use Rights & Responsibilities		
P3: Indigenous Peoples' Rights		
P4: Community Relations & Workers' Rights	<p>DCNR demonstrates a strong commitment to improving public understanding of forests and forest management (Indicator 4.1.f) through their communications, education, interpretation and support of learning opportunities.</p>	<p>Public reporting of scheduled harvesting operations occurs after sales are set up and after harvests have been completed. The public does not have ready access to information about forthcoming timber harvests during the planning stage. (Minor CAR 2013.1)</p>
P5: Benefits from the Forest	<p>Although less than half of the State Forests are located in Multiple Use Management Zones, the Bureau of Forestry typically generates more than \$30 million annually in timber revenue. Both managed and protected zones produce a host of environmental, recreational and aesthetic benefits highly valued by the public.</p>	
P6: Environmental Impact	<p>DCNR had developed an impressive Invasive Species Management Plan (2011). It was the product of the Invasive Species Team, involving personnel from across the agency. The plan sets out goals and objectives, methods for preventing introduction and spread, surveys and detection, control and restoration. Recent shale gas development has led to an expanded monitoring program in DCNR, with about 15 FTEs across the department allocated to monitoring.</p>	<p>Guidance for protecting soil and water during forestry operations is scattered among many publications from different agencies, causing confusion in the application of responsible practices. (Observation 2013.2)</p>
P7: Management Plan	<p>Although other public agencies update forest management plans on longer ten or fifteen year cycles, the</p>	

	Bureau of Forestry recently launched a revision of the 2007 State Forest Resource Management Plan (SFRMP) to be completed by 2014. The effort indicates respect for stakeholder concerns during a period of rapid change in resource development and funding sources.	
P8: Monitoring & Assessment	<p>DCNR has a comprehensive monitoring protocol. More intense activities such as shale gas extraction have led to focused monitoring efforts that are well funded through the O&G revenue account. Forest health and invasive species concerns are monitored continuously. Deer population impacts have also received extra attention.</p> <p>DCNR’s Forest Planning and Inventory Section manages a technologically advanced Forest Information and Management System incorporating computer modeling, measurement about 1,700 CFI plots on a five-year cycle, a new habitat classification system, annual landscape exams, remote sensing data and other innovations.</p>	
P9: High Conservation Value Forests	A 2011 process resulted in a detailed HCVF assessment. The result was the listing of more than 350 sites, totaling 177,000 acres. These sites represented 12 of the 15 criteria outlined by FSC for classifying high conservation values.	
P10: Plantations	NA	NA
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

<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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 (RA Report Finalized December 18, 2012)	
Select one: <input type="checkbox"/> Major CAR <input checked="" type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify): No deadline
FSC Indicator:	FSC US Forest Management Standard (V 1.0) Indicator 6.1.a
<p>Non-Conformity: The Bureau of Forestry has a policy that Environmental Reviews, which include a PNDI search, will be conducted for all types of projects that will disrupt or alter the environment, such as impacts related to surface mining, oil and gas leasing, or new trail construction. During the visit to District 10 (Sproul State Forest), auditors examined impacts related to the annual Brandywine Enduro motorcycle race. Although observations indicated that the impacts on the forest from the race may be relatively minor, the District Forester indicated that an Environmental Review or a PNDI search had not been conducted for new sections of the course that were located in undisturbed portions of the forest, where there was potential for a state-listed species to occur.</p>	
<p>Corrective Action Request: Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above.</p> <p>Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the nonconformance.</p>	
FME response <i>(including any evidence submitted)</i>	<p>Upon completion of the 2012 audit, meetings were established to gather information on a resolution process for closing the 2012 NCR. It was decided that formal guidelines were needed for these events to enforce a statewide standardization. In addition to other changes to address impacts from the events the Guidelines include a bolstering of the need to conduct an SFER for new trail sections. It was also decided to go a step further and require periodic PNDI review for the courses in question. One method for reducing impacts to the forest resources and easing the SFER and PNDI review process is to designate 3 alternate enduro courses that will be used on a permanent basis. This will give the clubs the ability to ride a new course each year and only require a PNDI review every 3 years. Areas where known populations of sensitive species exist or where potential habitat exist a PNDI may be required on a more regular basis upon the request of the Division of Conservation Science and Ecological Services.</p> <p>November 16, 2012 District Managers, Assistant Managers and Recreation Foresters who administer Enduro’s were asked to review their activities for additional conflicts and concerns related to impacts of enduro events on our forest resources (Off Road Motorized Special Activities-(Enduros).msg, District Enduro Comments.docx).</p> <p>January 18, 2013 - Central Office staff then met to consider district comments and to develop some general guidelines based on those comments. (Enduro Guidelines CO Meeting-Notes.docx).</p> <p>January 30, 2013 –A meeting was held to come to a consensus on needed revisions. Motorized Event Guidelines and Special Activities Agreements (SAA)</p>

	<p>were developed for these events and shared with the clubs. These draft guidelines were then sent out to the group for review and to see if it would work with their specific Enduro clubs needs. (Enduro Guidelines.msg, Guidelines for motorized events.msg, Motorized Activities Guidelines (Enduro).pdf, SAS Motorized Activities (Enduro Final).doc)</p>
<p>SCS review</p>	<p>BOF actions address the root cause of the nonconformity by developing Motorized Events Guidelines that require completion of State Forest Environmental Reviews for new trails. Potential conflicts are reviewed by DCNR ecologists/biologists, and jurisdictional agencies (such as the Game or Boat Commissions) are notified for consultation if the assessment indicates possible PDNI hits.</p> <p>Evidence was also provided that a PNDI query and State Forest Environmental Review was conducted for the Brandywine Enduro track on the Sproul State Forest (the specific nonconforming occurrence noted in the Dec 2012 CAR). Verification includes letters from the jurisdictional agencies indicating no significant environmental impacts.</p>
<p>Status of CAR:</p>	<p><input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i></p>

4.2.4 New Corrective Action Requests and Observations

Certificate Holder/Applicant	Commonwealth of Pennsylvania, DCNR Bureau of Forestry
CAR/OBS identified by (SCS representative)	Dr. David Capen, Kathryn Fernholz, Paul E. Pingrey
Date of Issuance	Sep 19, 2013
Applicable Standard(s)	FSC-US Forest Management Standard V1-0; SCS COC indicators for Forest Management
Audit Year/Type	2013/ Recertification

Finding Number: 2013.1	
Select one: <input type="checkbox"/> Major CAR <input checked="" type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	4.4.d
<p>Non-Conformity: Timber sales available for bidding and recently sold timber sales are posted at the BOF website; however, public reporting of scheduled harvesting operations occurs after sales are set up and after harvests have been completed. The public does not have ready access to information about forthcoming timber harvests during the planning stage. While the Bureau utilizes a range of tools to communicate with people who are likely to be directly impacted by management activities and managers are acknowledged to have an “open door policy”; interviews with DNR staff indicated an absence of public input opportunities before decisions are made on annual harvest plans.</p>	
<p>Corrective Action Request: The Bureau of Forestry shall clearly define and implement accessible methods for public participation in short-term planning processes, including harvest plans and operational plans.</p>	
FME response <i>(including any evidence submitted)</i>	
SCS review	
Status of CAR:	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

Finding Number: 2013.2	
Select one: <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	6.5.a, 6.5.c
<p>Issue: DCNR does have written guidelines for control of erosion, road construction, and protection of water resources. However, the auditors found that these guidelines were scattered in a variety of publications from a number of agencies (e.g., PA Dept. of Environmental Protection, Penn State, assorted statutes, DCNR manuals, contract clauses, etc.). When questioned about where to find Best Management Practices for soil and water conservation, employees suggested different resources, with little consistency in their responses. Auditors concluded that DCNR staff may not be as familiar as they should be with such guidelines.</p>	
<p>Observation 2013.2: Conformance with FSC-US Forest Management Standard could be improved if the Bureau of Forestry were to refresh training and develop a guide to summarize the compendium of information resource managers must consider to control erosion and minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.</p>	
FME response <i>(including any evidence submitted)</i>	
SCS review	
Status of CAR:	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

Finding Number: 2013.3	
Select one: <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
FMU CAR/OBS issued to (when more than one FMU):	
Deadline	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify):
FSC Indicator:	SCS FSC Chain of Custody Indicators for Forest Management Enterprises, Version 5-0, section 3.2
Issue: Currently, DCNR has authorization to use FSC trademarks from its former Certification Body. Since FSC license codes and COC codes will change with the re-issued certificate, updated requests should be submitted to SCS.	
Observation: Seek authorization from SCS in advance of implementing FSC trademark revisions and new usage of FSC trademarks in publications and web pages. SCS offers an online trademark approval web application to assist with the process.	
FME response <i>(including any evidence submitted)</i>	
SCS review	
Status of CAR:	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

5. 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments:	

SECTION B – APPENDICES (CONFIDENTIAL)

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

Reports (“Pennsylvania Bureau of Forestry Forest Products Statistical Report”) of production are prepared annually and made available on BOF’s website (<http://www.apps.dcnr.state.pa.us/forestry/sfrmp/documents.aspx>).

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES BUREAU OF FORESTRY - SILVICULTURE SECTION			American beech (low quality saw) 0.346 0.001		
NET VOLUME BY SPECIES FOR CONTRACT STUMPAGE SALES EXECUTED FROM 1/1/2012 TO 12/31/2012			White ash 1,703.847 3.626		
SAWTIMBER BY SPECIES			White ash (dead) 233.531 0.497		
SPECIES	MBF	% of Total	Green ash 0.238 0.001		
White pine	216.883	0.461	Basswood 355.974 0.757		
Hemlock	317.931	0.677	Basswood (dead) 11.778 0.025		
Hemlock (dead)	10.924	0.023	Yellow poplar 838.346 1.784		
Hemlock (low quality saw)	0.052	0.000	Yellow poplar (dead) 3.449 0.007		
Pitch pine	11.223	0.024	Hickory (species) 63.982 0.136		
Virginia pine	7.019	0.015	Hickory (species) (dead) 1.091 0.002		
Table Mountain pine	6.265	0.013	American elm 0.061 0.000		
Norway spruce	6.571	0.014	Bigtooth aspen 17.982 0.038		
Norway spruce (dead)	0.606	0.001	Black gum 0.904 0.002		
Sugar maple	3,120.843	6.641	Black walnut 0.204 0.000		
Sugar maple (dead)	200.499	0.427	Black cherry 11,131.650 23.687		
Red maple	7,997.071	15.740	Black cherry (dead) 2,448.867 5.211		
Red maple (dead)	977.779	2.081	Black cherry (low quality saw) 0.255 0.001		
Red maple (low quality saw)	4.730	0.010	Cucumber tree 181.629 0.386		
Red oak	7,573.425	16.115	Cucumber tree (dead) 0.845 0.002		
Red oak (dead)	2,169.902	4.617	Cucumber tree (low quality saw) 1.342 0.003		
Red oak (low quality saw)	22.591	0.048	Mulberry 0.061 0.000		
Black oak	754.525	1.606	Sassafras 0.074 0.000		
Black oak (dead)	154.008	0.328	Miscellaneous 1.176 0.003		
Scarlet oak	498.783	1.061	Miscellaneous (dead) 73.559 0.157		
Scarlet oak (dead)	299.411	0.637	Totals 46,995.306 100.000		
White oak	1,450.367	3.086	PULFWOOD BY SPECIES		
White oak (dead)	345.682	0.736	SPECIES	HCF	% of Total
White oak (low dbh saw)	0.319	0.001	Red maple (pulp)	515903	18.563
Chestnut oak	2,923.290	6.220	Red maple (pulp) (dead)	18251	0.657
Chestnut oak (dead)	329.199	0.700	Mixed oak (pulp)	481491	17.325
Yellow birch	221.244	0.471	Mixed oak (pulp) (dead)	474949	17.090
Yellow birch (dead)	0.634	0.001	Northern hardwood (pulp)	1131126	40.70
Sweet birch	529.981	1.128	Northern hardwood (pulp) (dead)	11411	0.411
Sweet birch (dead)	2.597	0.006	Mixed hardwood (pulp)	67388	2.425
Sweet birch (low quality saw)	0.069	0.000	Mixed hardwood (pulp) (dead)	857	0.031
Paper birch	0.656	0.001	Conifer (pulp)	64517	2.321
American beech	366.164	0.779	Conifer (pulp) (dead)	6417	0.231
American beech (dead)	2.772	0.006	Aspen (pulp)	6842	0.246
			TOTAL	2779152	100.000

Figure 4. Forest Products Statistical Report 2012 page 13. An equivalent **69,666 MBF** (sawtimber plus converted pulfwood) of forest products was sold to timber producers in 2012.

Annual Timber Harvests - Pennsylvania State Forests 2003-2012

SAWTIMBER AND PULPWOOD COMBINED

Year	MBF Sawtimber	Pulpwood MBF Equivalents	Total MBF Harvest	Sold Value	Total Acres Harvested
2003	36,802	30,608	67,410	\$34,534,921	10,923
2004	34,749	24,035	58,784	\$26,854,436	13,243
2005	46,790	29,934	76,724	\$43,284,800	14,359
2006	46,910	31,079	77,989	\$37,124,803	14,961
2007	44,500	19,065	63,565	\$29,800,000	12,290
2008	44,300	18,338	62,638	\$29,800,000	12,290
2009	59,400	39,120	98,520	\$31,200,000	12,660
2010	45,300	31,192	76,492	\$23,474,495	16,935
2011	43,300	29,119	72,419	\$25,523,096	12,429
2012	47,000	22,666	69,666	\$21,304,311	12,618
10-yr average	44,905		72,421	\$30,290,086	13,271

Annualized 10-yr goal

87,215

14,337

Data Sources:

<http://www.apps.dcnr.state.pa.us/forestry/sfrmp/documents.aspx> BOF Statistical Reports

http://www.apps.dcnr.state.pa.us/forestry/sfrmp/documents/Timber_Harv_Alloc_Goals_2006.pdf

To summarize the spreadsheet shown above:

- ✓ The 10-year average MBF/year of sawtimber & pulpwood actually harvested from State Forest land is 72,421 MBF/yr.
- ✓ The annual 10-year average MBF/year was exceeded in 2009. This was due to salvaging of dead timber from the 2007-2008 gypsy moth defoliations & resulting mortality.
- ✓ The 72,421 MBF/year of sawtimber & pulpwood actually harvested is less than the target goal of 87,215 MBF/year.
- ✓ Because the actual sawtimber & pulpwood volume actually harvested is less than the target goal, overharvesting has not occurred.

Appendix 2 – List of FMUs Selected for Evaluation

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
Roy Siefert	District Forester, Dist 16	570-724-2868	Phone interview 8/9/13
Timothy Clapham	Director of Human Resources	Harrisburg – Opening Meeting– August 26th	In=person
Matt Beaver	Operations and Recreation	Harrisburg – Opening Meeting– August 26th	In=person
Jason Hall	Recreation	Harrisburg – Opening Meeting– August 26th	In=person
Mike Kern	Forest Fire Protection	Harrisburg – Opening Meeting– August 26th	In-person
Tim Marasco	Forest Health Supervisor	Harrisburg – Opening Meeting– August 26th	In-person
Karl Maul	Operations	Harrisburg – Opening Meeting– August 26th	In=person
Greg McPherson	Geospatial	Harrisburg – Opening Meeting– August 26th	In=person
John Smoluk	Geospatial	Harrisburg – Opening Meeting– August 26th	In=person
Jeff Wolesslagle	Communications	Harrisburg – Opening Meeting– August 26th	In=person
Joe Petroski	Geospatial Applications	Harrisburg – Opening Meeting– August 26th	In=person
Chad Voorhees	Forest Resource Planner	Harrisburg – Opening Meeting– August 26th	In=person
Don Eggen	Forest Health Manager, Division Chief	Harrisburg – Opening Meeting– August 26th	In=person
Seth Cassell	Chief, Forest Resource Planning and Information	Harrisburg – Opening Meeting– August 26th	In=person
Jason Albright	Assistant State Forester	Harrisburg – Opening Meeting– August 26th	In=person
David Mong	Forest Program Specialist –Right of Way	Harrisburg – Opening Meeting– August 26th	In=person
Bob Beleski	Forest Program Specialist – Silviculture	Harrisburg – Opening Meeting– August 26th	In=person
Zack Roeder	Forest Resource Planner	Harrisburg – Opening Meeting– August 26th	In=person
Shawn Lehman	Forest Program Mgr – Inventory and Monitoring	Harrisburg – Opening Meeting– August 26th	In=person
Rebecca Bowen	Ecological Services Section Chief	Harrisburg – Opening Meeting– August 26th	In=person

Aura Stauffer	Wildlife Biologist, Ecological Services	Harrisburg – Opening Meeting– August 26th	In=person
Dan Devlin	PA State Forester	Harrisburg – Opening Meeting– August 26th	In=person
Matt Keefer	Assistant State Forester	Harrisburg – Opening Meeting– August 26th	In=person
Ellen Shultzabarger	Chief, Conservation Science and Ecological Resources Division	Harrisburg – Opening Meeting– August 26th	In=person
Kevin Carlin	Chief, Forest Pest Suppression	Harrisburg – Opening Meeting– August 26th	In=person
Brad Regester	Forest Program Specialist, FPM	Tiadaghton State Forest – August 27	In=person
Tom Casilio	Assistant District Manager – Forest District (FD) 12	Tiadaghton State Forest – August 27	In=person
Jason Ditty	Assistant Forest Program Manager, Inventory and Monitoring	Tiadaghton State Forest – August 27	In=person
Arianne Proctor	Marcellus Shale Program Manager	Tiadaghton State Forest – August 27	In=person
Jodie Gribik	Forest Program Specialist, BOF Operations	Tiadaghton State Forest – August 27	In=person
Scott Miller	Chief, Silviculture	Tiadaghton State Forest – August 27	In=person
Don Bratz	Forester, FD12	Tiadaghton State Forest – August 27	In=person
Ben Sands	Forester, FD12	Tiadaghton State Forest – August 27	In=person
Eric Fritzinger	Forester, FD12	Tiadaghton State Forest – August 27	In=person
David Haubrick	Silviculture specialist	Tiadaghton State Forest – August 27	In=person
Jason Stellfox	Assistant District Forester, FD12	Tiadaghton State Forest – August 27	In=person
Doug Frederick	Forester, FD12	Tiadaghton State Forest – August 27	In=person
John Brodnicki	Forest Program Specialist, Geospatial App Section	Tiadaghton State Forest – August 27	In=person
Floyd Hartman, Jr.	Forester – FD12	Tiadaghton State Forest – August 27	In=person
Jeff Prowant	District Manager	Tiadaghton State Forest – August 27	In=person
Greg Kisko	Forester, FD12	Tiadaghton State Forest – August 27	In=person

Robert Heintz	Forest Technician, FD12	Tiadaghton State Forest – August 27	In=person
Jason Smith	Forester, FD12	Tiadaghton State Forest – August 27	In=person
Marty Lentz	Assist District Forester, District 9	Moshannon State Forest – August 28	In-person
Timothy Frontz	Area Forest Health Specialist, Dist 8, 9, 13, 14	Moshannon State Forest – August 28	In-person
Rich Johnson	Forester, D9	Moshannon State Forest – August 28	In-person
Dave Mong	Forest Program Specialist – Right of Way	MoShannon State Forest – August 28	In-person
Bill Cook	Forest Program Specialist – Operations	Moshannon State Forest – August 28	In-person
Jason Cotton	Forester, D9	Moshannon State Forest – August 28	In-person
Brendan Wilson	Forester, D9	Moshannon State Forest – August 28	In-person
Tom Hanes	Forest Program Specialist Recreation	Moshannon State Forest – August 28	In-person
Ryan Ling	Forester, D9	Moshannon State Forest – August 28	In-person
Scott Kucharcik	Forester, D9	Moshannon State Forest – August 28	In-person
Carrie Gilbert	Forest Planner	Moshannon State Forest – August 28	In-person
Andrew Rohrbaugh	Ecological Services, Botanist	Moshannon State Forest – August 28	In-person
Emily Just	Wildlife Biologist	Central Office, Moshannon & Elk S.F. – August 28-29	In-person
Tom Asp	Forester, D13	Elk State Forest – August 29	In-person
Toby Herzing	Forester, D13	Elk State Forest – August 29	In-person
Andy Sidelinger	Oil and Gas Forester	Elk State Forest – August 29	In-person
Rob Ference	Forester, D13	Elk State Forest – August 29	In-person
Pete Zoschg	Forester, D13	Elk State Forest – August 29	In-person
David Haubrick	Silviculture	Elk State Forest – August 29	In-person
Jeanne H. Wambaugh	District Forester	Elk State Forest – August 29	In-person
Diana Ball	Forest Technician	Elk State Forest – August 29	In-person

Tim Sherry	Forest Technician	Elk State Forest – August 29	In-person
Tom Hanes	Forest Program Specialist	Elk State Forest – August 29	In-person
Joe Kellert	Asst. District Forester	Elk State Forest – August 29	In-person
Scott E. Rimpa	Assistant District Forester	Cornplanter State Forest – August 30	In-person
Cecile Stelter	District Forester	Cornplanter State Forest – August 30	In-person
John Nobles	Forester	Cornplanter State Forest – August 30	In-person
Nate Reagle	Ecological Program Specialist - Wildlife	Cornplanter State Forest – August 30	In-person
Chris Firestone	Botanist	Cornplanter State Forest – August 30	In-person

List of other Stakeholders Consulted

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.
Eric Bruggeman	Recreational user of FMU	717-576-9568	Online/Phone	
Susan Stout	USDA Forest Service	814-563-1040	Online	
Bonnie Issac	Botanical Society of Western PA	isaacb@carnegiemnh.org	Online	
Tom Shervinskie	Pennsylvania Fish and Boat Commission	tshervinsk@pa.gov	Online	
Steve Szoke	Neighbor to FMU	570-924-3522	Online	
Dave Coleman	Sierra Club	707-318-1789	Phone	
Charlotte Dietrich	Potter County Planning	814-274-8254	Phone	
Amy Kessler	North Central Regional Planning	717-432-0360	Phone	
Gary Kribbs	CNRAC Advisory Committee	610-449-9090	Phone	
Gary Thornbloom	Sierra Club	814-353-3466	Phone	
Charlie Benn	Labor/Union Stakeholder	717-564-9312	Phone	
Darrin Scugarts	Contractor/Logger	814-592-5158	Phone	
Jeff Wagner	PA Nat'l Heritage Program	(called auditor)	Phone	
Denny Mann	PA OHV Association	(called auditor)	Phone	
Bud Willis	PA Equine Council	814-379-3759	Phone	
Rob Doyle	Contractor	304-677-4436	Phone	
Curt Ashenfelter	Keystone Trails Association	717-238-7017	Phone	
Christian Duffy	Contractor	570-594-7828	Phone	
David Whiteman	PA Trail Riders Association	814-574-1798	Phone	
Amy Shields	St. Mary's Lumber	814-834-1209	Phone	

John Levavassear	Hancock Forest Management	814-887-9135	Phone	
Kurt Gottschalk	USFS	304-285-1598	Phone	
Jim Cropp	Gas Lease Holder	724-228-8811	Phone	
Jodi Foster	Elk County	814-776-5335	Phone	
Debbie London	McKeen County	814-887-2754	Phone	
Dave Kaufman	Contractor/Logger	(field interview)	Field Interview	
Ed Lawrence	Recreational User of the FMU	570-925-5285	Phone	
Additional Anonymous Stakeholders (11)			Online survey responses posted without providing a name and Interviewees that declined to provide permission to list their name	

Appendix 4 – Additional Evaluation Techniques Employed

No additional auditing techniques were employed during this evaluation.

Appendix 5 – Certification Standard Conformance Table

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

FSC-US Forest Management Standard (v1.0)
 Approved by FSC-IC, July 8, 2010
 Pennsylvania DCNR Re-Evaluation Audit August 26-30, 2013

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	C	PA DCNR exhibits strong conformance with laws, rules, and regulations. There are no enforcement actions against the agency related to compliance with applicable federal, state, or local forestry and related environmental laws and regulations. Department legal counsel provided an email summary of three pending complaints undergoing investigation. No nonconformities with this indicator are implicated.

annual audit.		
1.1.b. To facilitate legal compliance, the <i>forest owner or manager</i> ensures that employees and contractors, commensurate with their responsibilities, are duly informed about applicable laws and regulations.	C	<p>DCNR has an extensive set of internal administrative policies that assure compliance with laws. Training is provided to employees to make them aware of requirements. Notices and updates to policies are regularly distributed. Department legal staff advises the agency.</p> <p>Interviews with staff indicate that the Pennsylvania State Code is readily available via the Internet..</p> <p>Timber sale contracts include a section on “CONTRACTOR INTEGRITY PROVISIONS” that summarizes applicable laws and regulations.</p>
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	<p>The Department is required by statute to pay aid in lieu of taxes of \$1.20 per acres to municipalities in which State Forests lands are located. Interview with Bureau of Forestry (BOF) Business Manager Kathy Prowant confirmed the annual payments are made by electronic transfer, with copies to the State Comptroller via a network system to verify the transfers.</p> <p>Fees associated with gas and oil leases are also shared with local governments, but the revenue is collected by the state Utility Commission, which is responsible for disbursement to other units of government (interview with Seth Cassell).</p>
C1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	C	
1.3.a. Forest management plans and operations comply with relevant provisions of all applicable binding international agreements.	C	<p>State Code and statutes include protocols for implementation of binding international agreements. § 7a.46. Resolving conflicts with other jurisdictions reads: “It is not the intention of this subchapter to violate or conflict with any international treaty or reciprocal preference statute of another jurisdiction.” There is no evidence to suggest the DCNR does not abide by written protocols.</p> <p>PA DCNR webpages that describe protected species include reference to CITES (e.g., ginseng harvest).</p>
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	C	The audit team found no evidence of any conflicts between laws and the FSC-US Forest Management Standard. DCNR actively

<p>conflicts with compliance with FSC Principles, Criteria or Indicators are documented and referred to the CB.</p>		<p>communicates with SCS and FSC-US on concerns related to the standard (e.g. Forest Health Specialist’s concern about FSC designating critical pesticides as highly hazardous; past CAR responses on oil and gas issues, etc.).</p>
<p>C1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.</p>	<p>C</p>	
<p>1.5.a. The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the Forest Management Unit (FMU).</p>	<p>C</p>	<p>State Forest Officers and DCNR Rangers are law enforcement officers who must successfully graduate from the Pennsylvania Municipal Police Officers' Education and Training Commission Academy (MPOETC). DCNR Rangers in both parks and forests where their authority is exactly the same. They routinely check on facilities, offer answers to visitors’ questions, and help to maintain order. They have full arrest powers while in DCNR lands and do carry sidearms. However, they do not have jurisdiction over Pennsylvania State Game Lands, which are patrolled by Wildlife Conservation Officers employed by the Pennsylvania Game Commission. DCNR rangers do enforce game laws as well as fishing and boating laws in state parks, however, although the Pennsylvania Fish and Boat Commission is completely independent of the Pennsylvania Game Commission. Both agencies are independent of DCNR, but do work in cooperation with each other.</p> <p>The 1984 the PA Crimes Code was amended to add restitution for the theft of standing timber in the amount of twice the value of the timber taken. For civil claims, the following damages are authorized: 3 times the timber’s market value IF the act was deliberate; 2 times the timber’s market value if the act was due to negligence; or the market value if the removal was due to the person (logger or landowner) had reasonable basis for believing the land was his.</p> <p>DCNR provides ample road, trail and boundary signage.</p> <p>DCNR provides public access to regulations via the Internet: http://www.dcnr.state.pa.us/legal/regulations/index.htm</p> <p>DCNR supports public training programs intended to foster responsible use (e.g., snowmobile safety training, ATV training).</p> <p>Also, see enforcement section of SFRMP.</p>
<p>1.5.b. If illegal or unauthorized activities occur, the forest owner or manager implements actions designed to curtail such activities and correct the situation to the extent possible for meeting all land management objectives with consideration of available</p>	<p>C</p>	<p>DCNR Rangers have all of the following powers: To be vested with the same powers as are, by existing laws, conferred upon Constables and Police Officers of cities of the first class. ... Notwithstanding any provision of the law to the contrary, individuals appointed and commissioned by the Department of Conservation and Natural Resources to preserve order in State Parks or State Forest lands are specifically authorized to enforce</p>

<p>resources.</p>		<p>those provisions of this title which designate violations as summary offenses while acting within the State Park or State Forest lands. The authority includes the power to stop vehicles suspected of Summary offenses, to issue citations for Summary offenses, and if a vehicle is stopped for a suspected Summary offense, to make arrests where evidence appears of additional offenses designated as Misdemeanors or Felonies. (Act 68 Section 6313(a). 2001)</p> <p><u>Act 18</u> DCNR was created by the act of June 28, 1995 by what was known as the Conservation and Natural Resources Act, or Act 18. This law implements Article I, section 27 of the Pennsylvania Constitution.</p> <p><u>Summary of major laws administered by DCNR</u> Nine major laws that have been enacted by Pennsylvania's General Assembly are administered by DCNR.</p> <p><u>Regulations adopted by DCNR</u> Title 17 of the Pennsylvania Code contains the regulations and statements of policy of the Department.</p>
<p>C1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.</p>	<p>C</p>	
<p>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.</p>	<p>C</p>	<p>PA DCNR has been FSC-certified since 1998 – the first certified state agency in U.S.</p> <p>The SFRMP includes an FSC Commitment. An FSC commitment is also posted on the DCNR Forest Certification Internet page (accessed Sep 17, 2013).</p>
<p>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.</p>	<p>C</p>	<p>The DCNR BOF is currently in possession of 6 properties where timber rights were reserved for a period of time by the seller. The BOF also has one nursery and one golf course. These properties are excluded from the scope of the certificate.</p> <p>DCNR Bureau of Forestry occasionally arranges harvests for other state agencies that are not certified (e.g., Bureau of State Parks). Procedures require that contracts specify “Not FSC-certified” for such sales.</p> <p>At this time no areas have been excised. As part of the DCNR BoF Approach to Excision (2011) the FME is undergoing and analysis to excise acres where subsurface rights are owned by another entity and development is occurring. This analysis is underway and should be ready for implementation in 2014.</p>

		File References: BOF Approach to Excision.docx Acres_Removed_From_Certification.xml
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	Long history of FSC certification and interaction with CBs demonstrates conformance.
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	The DCNR’s long-term rights to use are defined in Pennsylvania laws, regulations, and guidelines. Relevant regulations include the Conservation and Natural Resources Act 18. The sale or transfer of timber is authorized by the Administrative Code of 1929, Act of April 9, P.L. 177, 71 P.S. § 191.
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	Use and access rights held by others that impact the BOF’s management include camp lease holders, severed subsurface mineral rights holders, and mineral lease holders. These rights are documented in leases agreements, guidelines, policies, procedures and other materials. Recreation access and use rights are documented in special activity agreements and associated policies.
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	Auditors observed boundaries to be clearly marked on maps made available in the office, including state forest maps produced and distributed to the public. Boundaries were also observed to be well and consistently marked in the field. Markings included painted boundaries as well as posted signs. District Foresters described methods for maintaining boundary markings through routine re-marking.
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. <i>Applicability Note: For the planning and management of publicly owned forests, the local community is defined as all residents and property owners of the relevant jurisdiction.</i>	C	
2.2.a. The forest owner or manager allows the exercise of tenure and	C	The BOF has allowed the continuation of more than 4,000 camp lease holders within the state foresters as prescribed by law and

<i>use rights</i> allowable by law or regulation.		regulation. BOF has also allowed the exercise of mineral use rights as prescribed by law. Other use rights that are allowed include diverse forms of motorized and non-motorized recreation and hunting.
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	The BOF has procedures for notifying lease holders of activities that may affect their rights, including sending letter and holding formal and informal meetings. The BOF has a number of advisory groups related to forest uses that are consulted on management activities.
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 <i>disputes</i> 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	The BOF described several situations with lease holders, contractors, boundary disputes, etc where efforts to resolve conflicts included initial informal methods (e.g., phone calls, meetings with District Forester), as well as examples of utilizing legal council and other resources (e.g., appraisals and fair compensation) to resolve disputes.
2.3.b. The forest owner or manager documents any significant disputes over tenure and use rights.	C	BOF provided a listing to the CB that documents disputes over tenure and use rights.
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.	N/A	
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.	N/A	
3.1.b. The manager of a tribal forest secures, in writing, informed consent regarding forest management activities from the	N/A	

tribe or individual forest owner prior to commencement of those activities.		
C3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.	C	
3.2.a. During management planning, the forest owner or manager consults with American Indian groups that have legal rights or other binding agreements to the FMU to avoid harming their resources or rights.	C	BOF has invited participation from American Indian groups during management plan and maintains a contact list of tribal contacts (last updated January 2013).
3.2.b. Demonstrable actions are taken so that forest management does not adversely affect tribal resources. When applicable, evidence of, and measures for, protecting tribal resources are incorporated in the management plan.	C	The BOF partners with the PA Historical and Museum Commission's Bureau of Historic Preservation (BHP) to protect archaeological sites, architectural and cultural resources. Details about the database, mapping and protections are described in the Silviculture Manual.
C3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.	C	
3.3.a. The forest owner or manager invites consultation with tribal representatives in identifying sites of current or traditional cultural, archeological, ecological, economic or religious significance.	C	BOF has attempted to engage tribes that are generally located outside of PA but may have an interest in PA state lands management. To date, tribal representatives have not responded to invited consultation.
3.3.b. In consultation with tribal representatives, the forest owner or manager develops measures to protect or enhance areas of special significance (see also Criterion 9.1).	C	In the absence of tribal response to invited consultation, the BOF has established procedures to protect resources and cooperate and seek the advice of the BHP on matters of new listings and appropriate protections. The BHP's database is utilized to search for known sites and information about new sites is provided to the BHP for their records.
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	N/A	

commence.		
3.4.a. The forest owner or manager identifies whether traditional knowledge in forest management is being used.	N/A	DCNR BOF does not use indigenous people’s traditional knowledge in its management systems.
3.4.b. When traditional knowledge is used, written protocols are jointly developed prior to such use and signed by local tribes or tribal members to protect and fairly compensate them for such use.	N/A	
3.4.c. The forest owner or manager respects the confidentiality of tribal traditional knowledge and assists in the protection of such knowledge.	N/A	
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	The DCNR and BOF provide quality employment opportunities using primarily civil service hiring practices and negotiated compensation packages. Concern was expressed during stakeholder interviews whether BOF managerial employees are provided fair compensation considering wage deferrals that occurred as a result of the 2008 recession. Manager pay raises have lagged behind union-covered employees. As explained by the agency, BOF has no control over manager pay raises, which must be approved by the Governor’s Office and necessary funding allocated through the state budgeting process. Manager pay is an issue across state government. DCNR’s human resources bureau has been heavily engaged in the issue and has been working with the Governor’s Office in finding a solution. In 2013, managers received a total of 2.75% pay raises, in line with union raises. In 2014, manager raises are again set to match union raises, totaling 4.75 percent. A recent DCNR Human Resources pay study found that forest manager pay levels are comparable to those in other states in the mid-Atlantic region.
4.1.b. Forest work is offered in ways that create high quality job opportunities for employees.	C	Positions are developed that provide diverse job opportunities, and staff members are able to engage in special areas of interest within the Districts. Employees may start as part-time, seasonal, or interns and advance into other positions.
4.1.c. Forest workers are provided with fair wages.	C	During an interview, a logger expressed satisfaction with pay, although he said it is a difficult industry with a lot of risks. In general, the state logging community appears to be fairly stable, and most timber harvest proposals receive multiple bids indicating a willingness to accept the available compensation.

<p>4.1.d. Hiring practices and conditions of employment are non-discriminatory and follow applicable federal, state and local regulations.</p>	<p>C</p>	<p>Hiring practices are covered by civil service regulations. Many positions are union positions under a contract that is current.</p>
<p>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.</p>	<p>C</p>	<p>Work opportunities are offered internally and externally. Qualifications are determined by the position and within the civil service requirements (e.g., testing procedures, etc). Many employees, workers, services and goods are sourced locally (e.g., employees are local residents, contractors live locally, utilities and other services are provided locally).</p>
<p>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.</p>	<p>C</p>	<p>BOF has made a strong commitment to supporting public knowledge and understanding of forestry and forests in Pennsylvania. Efforts include news releases, social media, interpretive centers, interpretive trails and signage, and newsletters. The BOF has also recently increased activities for Project Learning Tree (PLT) and other environmental education efforts.</p>
<p>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.</p>	<p>C</p>	<p>Many BOF employees are active community members, and engaged in civic activities. Activities include public presentations, working weekend and extended hours to participate in meetings, hosting tours, and work with local businesses and schools.</p>
<p>C4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.</p>	<p>C</p>	
<p>4.2.a. The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).</p>	<p>C</p>	<p>Information about safety incidences, policies and procedures was reviewed to confirm conformance. The BOF has active programs to increase employee awareness and participation in safety initiatives. There are also safety committees and training events.</p>
<p>4.2.b. The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts or other written agreements include safety requirements.</p>	<p>C</p>	<p>BOF demonstrated consistent use of safety equipment by employees and contractors, including hardhats, hearing protection, safety glasses, and chaps. Safety requirements are included in contracts.</p>
<p>4.2.c. The forest owner or manager hires well-qualified service providers to safely implement the management plan.</p>	<p>C</p>	<p>BOF requires SFI training for operators and copies of training documentation was included in the contract files and confirmed through stakeholder interviews.</p>
<p>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).</p>	<p>C</p>	

<p>4.3.a. Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.</p>	<p>C</p>	<p>There is an active union for DCNR employees with a current contract through 2015. Interviews with stakeholders indicated employees are not hindered from associating with other works and advocating for their job interests.</p>
<p>4.3.b. The forest owner or manager has effective and culturally sensitive mechanisms to resolve disputes between workers and management.</p>	<p>C</p>	<p>BOF employees are able to express concerns and disputes effectively, including informal mechanisms that include talking with co-workers, supervisors or other specialized staff (e.g, Human Resources personnel). Union members may also utilize more formalized dispute mechanisms.</p>
<p>C4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.</p>	<p>C</p>	
<p>4.4.a. The forest owner or manager understands the likely social impacts of management activities, and incorporates this understanding into management planning and operations. Social impacts include effects on:</p> <ul style="list-style-type: none"> • Archeological sites and sites of cultural, historical and community significance (on and off the FMU); • Public resources, including air, water and food (hunting, fishing, collecting); • Aesthetics; • Community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health; • Community economic opportunities; • Other people who may be affected by management operations. <p>A summary is available to the CB.</p>	<p>C</p>	<p>BOF maintains and reports extensive activities for evaluating social impacts. Efforts include guidelines that protect archaeological and cultural sites (as documented in the silvicultural guidelines and observed in the field), monitoring of environmental impacts to public resources (including water quality monitoring, and documentation of hunting and gathering activities on the forest), management of viewsheds and tourism impacts (including scenic driving considerations), monitoring of economic conditions (including recent efforts to understand changes in the regional sawmill capacity), and opportunities for public comment and input (including comment cards that address current management concerns, easily accessible information online, email and phone numbers readily available, and online survey and social media tools). Summarizes of social impact evaluation results were provided to the CB.</p>
<p>4.4.b. The forest owner or manager seeks and considers input in management planning from people who would likely be</p>	<p>C</p>	

<p>affected by management activities.</p>		
<p>4.4.c. People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action so that they may express concern.</p>	<p>C</p>	<p>DCNR has an “open door policy” for people to express concerns about direct impacts. Specific contact procedures are outlined in guidelines and manuals for Silviculture treatments, gas leases and forest pest management. The DCNR BOF requires direct stakeholder notification prior to activities to all those directly impacted by the activity. Examples include; lease camps, neighboring landowners, power or gas ROW Companies, Gas operators, Trail Clubs and Associations, municipal watersheds, Pennsylvania Historical and Museum Commission, DEP, and Parks.</p> <p>In addition to direct contact, website availability and available contact information the bureau sends out news releases for large or broad activities that may impact a larger group.</p>
<p>4.4.d. For public forests, consultation shall include the following components:</p> <ol style="list-style-type: none"> 1. Clearly defined and accessible methods for public participation are provided in both long and short-term planning processes, including harvest plans and operational plans; 2. Public notification is sufficient to allow interested stakeholders the chance to learn of upcoming opportunities for public review and/or comment on the proposed management; 3. An accessible and affordable appeals process to planning decisions is available. <p>Planning decisions incorporate the results of public consultation. All draft and final planning documents, and their supporting data, are made readily available to the public.</p>	<p>NC Minor CAR</p>	<p>BOF has well-developed and formalized process for consultation as a public land manager. Consultation methods include public meetings that are publicized and distributed regionally. The procedures are most commonly applied to long-term planning processes. BOF has extensive contact lists for stakeholders and individual Districts also maintain contact lists. BOF continues to grow their methods for notifying stakeholders about public review opportunities via the use of social media and online survey tools (see above). BOF is just beginning the formal management plan revision process and will need to be cognizant of the requirement to make all documents and supporting data available to the public.</p> <p>DCNR also has a number of advisory committees that help steer management activities:</p> <ul style="list-style-type: none"> • Pennsylvania Biological Survey and Vascular Plant Technical Committee • Pennsylvania Rare Plant Committee • The Ecosystem Management Advisory Committee • Silviculture/Timber Advisory Committee • Recreation Advisory Committee • Pennsylvania Forest Stewardship Steering Committee • The Pennsylvania Urban and Community Forestry Council • Pine Creek Rail Trail Advisory Committee • Pennsylvania Appalachian Trail Committee • Conservation and Natural Resources Advisory Council (CNRAC) • PA Greenways Partnership Commission • Pennsylvania Recreational Trails Advisory Board • Snowmobile and ATV Advisory Committee <p>Non-Conformity: Timber sales available for bidding and recently sold timber sales are posted at the BOF website; however, public reporting of scheduled harvesting operations occurs after</p>

		<p>sales are set up and after harvests have been completed. The public does not have ready access to information about forthcoming timber harvests during the planning stage. While the Bureau utilizes a range of tools to communicate with people who are likely to be directly impacted by management activities and managers are acknowledged to have an “open door policy”; interviews with DNR staff indicated an absence of public input opportunities before decisions are made on annual harvest plans.</p> <p>CAR 2013.1 The Bureau of Forestry shall clearly define and implement accessible methods for public participation in short-term planning processes, including harvest plans and operational plans.</p>
<p>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.</p>	C	
<p>4.5.a. The forest owner or manager does not engage in negligent activities that cause damage to other people.</p>	C	<p>There was no evidence found during the audit that indicated negligent activities by the BOF. Signs are posted to warn of truck traffic and other conditions that may create a hazardous situation and gates may be closed to prevent entry during activities.</p>
<p>4.5.b. The forest owner or manager provides a known and accessible means for interested stakeholders to voice grievances and have them resolved. If significant disputes arise related to resolving grievances and/or providing fair compensation, the forest owner or manager follows appropriate dispute resolution procedures. At a minimum, the forest owner or manager maintains open communications, responds to grievances in a timely manner, demonstrates ongoing good faith efforts to resolve the grievances, and maintains records of legal suites and claims.</p>	C	<p>External stakeholders indicate a good working relationship with BOF. Individuals and organizations are able to easily contact personnel (contact information is provided online). The BOF maintains open communications (an open door policy) and demonstrated a commitment to prioritizing the resolution of conflicts in a timely, consistent, and thoughtful manner. Records of legal conflicts are maintained and were provided to the CB for review.</p>
<p>4.5.c. Fair compensation or reasonable mitigation is provided to local people, communities or adjacent landowners for substantiated damage or loss of</p>	C	<p>The BOF utilizes legal staff to aid in determining fair compensation and mitigation procedures when the need arises (e.g., land exchanges, boundary disputes, etc).</p>

income caused by the landowner or manager.		
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	<p>DCNR has a 15-year record of meeting the standards of FSC certification. The Department has a staff of more than 500 qualified people, which includes 195 professional and technical staff. With a \$50 million DCNR annual budget, <1% (\$2.2 million) comes from the general fund. \$17.3 million is from the Oil and Gas Lease Fund, which consists of rents and royalties from drilling on state forestland.</p> <p>In respect to roads and bridges, primarily in PennDOT District 2, BOF acknowledges poor condition of some roads and bridges subject to heavy truck traffic from oil and gas development, timber production and other uses. DCNR and PennDOT are diligently working on solutions as evidenced by documentation shared with the auditors, and timber producers have reduced timber sale bid prices to reflect road fees.</p>
5.1.b. Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.	C	As a public agency, DCNR has weathered a period of statewide financial difficulty, requiring salary freezes, hiring restrictions, etc. However, revenues from gas leasing in recent years have provided relief for the Department and a recent expansion of employees, especially those needed to manage the gas extraction and assess the impacts of same.
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	Inspection of harvest operations, interviews with contract employees, and examination of contracts for forest harvesting and other services, confirm that local businesses—large and small—are most commonly awarded harvesting contracts. Local mills are numerous, some of which bid for sales almost exclusively on state forest lands.
5.2.b. The forest owner or manager takes measures to optimize the use	C	DCNR sells trees on the stump, thus the diversification of products is controlled primarily by advertising sales in a variety

<p>of harvested forest products and explores product diversification where appropriate and consistent with management objectives.</p>		<p>of forest types and age classes. Recent salvage harvests have provided more low quality wood than normal, allowing more opportunity for commercial firewood operators and pulp sales.</p>
<p>5.2.c. On public lands where forest products are harvested and sold, some sales of forest products or contracts are scaled or structured to allow small business to bid competitively.</p>	<p>C</p>	<p>DCNR advertises a wide variety of sales, allowing bids by contractors of all sizes. Auditors examined records of recent sales for four forest districts and noted sales that ranged from less than 20 acres to more than 300 acres.</p>
<p>C5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.</p>	<p>C</p>	
<p>5.3.a. Management practices are employed to minimize the loss and/or waste of harvested forest products.</p>	<p>C</p>	<p>DCNR foresters prepare sales prospectuses and mark trees carefully to assure harvests that avoid waste. Usually, all trees to be cut are marked. If a marked tree is not merchantable, then it is simply felled and left on the site to provide structure. Inspection of landings and recently harvest stands confirmed that utilization is excellent.</p>
<p>5.3.b. Harvest practices are managed to protect residual trees and other forest resources, including:</p> <ul style="list-style-type: none"> • soil compaction, rutting and erosion are minimized; • residual trees are not significantly damaged to the extent that health, growth, or values are noticeably affected; • damage to NTFPs is minimized during management activities; and • techniques and equipment that minimize impacts to vegetation, soil, and water are used whenever feasible. 	<p>C</p>	<p>DCNR foresters do not hesitate to stop forest harvesting operations when soil conditions are unsuitable for machinery. Also, it is common to see examples where harvest prescriptions limit harvest to winter months when ground is frozen. Inspection of more than a dozen recent harvest sites revealed almost no damage to residual trees, and great care to avoid unacceptable rutting and erosion.</p>
<p>C5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.</p>	<p>C</p>	
<p>5.4.a. The forest owner or manager demonstrates knowledge of their operation's effect on the local economy as it relates to existing</p>	<p>C</p>	<p>Supervising foresters in four districts visited during the audit were quite informed about the local economy and aware of the importance of their operations on local communities.</p>

and potential markets for a wide variety of timber and non-timber forest products and services.		
5.4.b The forest owner or manager strives to diversify the economic use of the forest according to Indicator 5.4.a.	C	Beyond a reasonably consistent flow of timber products, recent development of shale gas on state forests is bolstering local businesses. Recreational opportunities abound on state forests visited during the audit (e.g., “thousands” of people per day at a single elk viewing site on Elk State Forest). Four thousand leased camp (cabin) sites on state forests attract many thousands of people to state forests and the surrounding communities.
C5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.	C	
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	As a public land management agency, DCNR’s primary mission is to assure the health of the Commonwealth’s forests and conservation of native wild plants. Major program areas, however, also include recreation and ecological services. Close working relationships were evident with the Game Commission and Fish and Boat Commission. Planning documents for the entire State Forest System and for each Forest District address the many services and resources managed by the Department.
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	The DCNR Forest Plan (updated in 2007) and State Forest Management Plans for each district are developed around information related to the variety of forest services and resources provided (E.g., District Plan for Moshannan State Forest).
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	C	The Bureau of Forestry formed a partnership with the Pennsylvania State University's School of Forest Resources (PSU) in 1999 to develop a harvest scheduling model for planning harvests on each of the 20 forest districts. The system as documented in the SFRMP is described in more detail under 7.1.m. During field interviews, there were questions about when the Harvest Allocation Model will be run again. As explained by the Bureau, “The written rationale used by the Bureau of Forestry to evaluate when the harvest allocation model should be re-run is defined in slide 98 of the Timber Harvest Allocation Model powerpoint presentation:

<p>based on:</p> <ul style="list-style-type: none"> • documented growth rates for particular sites, and/or acreage of forest types, age-classes and species distributions; • mortality and decay and other factors that affect net growth; • areas reserved from harvest or subject to harvest restrictions to meet other management goals; • silvicultural practices that will be employed on the FMU; • management objectives and desired future conditions. <p>The calculation is made by considering the effects of repeated prescribed harvests on the product/species and its ecosystem, as well as planned management treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.</p>		<div data-bbox="711 195 1373 680" style="border: 1px solid black; padding: 10px;"> <h3 style="text-align: center; background-color: #76b82a; color: white; padding: 5px;">When Do We Re-Plan</h3> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <ul style="list-style-type: none"> ✓ New Modeling Functionality is Available ✓ Better or Updated Inventory Data ✓ Major Natural Disturbance Events ✓ Initial Assumptions Have Changed </div> <div style="width: 35%; text-align: center;"> <pre> graph TD A[Inventory] --> B[Planning] B --> C[Implementation] C --> D[Monitoring] D --> B </pre> </div> </div> <p style="font-size: small; margin-top: 10px;">www.dcnr.state.pa.us </p> </div> <p>The Bureau of Forestry has put this rationale into action in 2006 when the harvest allocation model was re-run for three forest districts (districts 12, 18, & 20). In 2006, the boundaries of these forest districts were re-aligned, which caused the commercial land base for these forest districts to drastically change making the original harvest schedules for these three districts out-of-date. The realignment of these three forest districts warranted a re-run of the harvest allocation model, which was successfully completed and the new timber harvest schedules are still being used today.”</p>
<p>5.6.b. Average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level.</p>	<p>C</p>	<p>The PA DCNR sustainable harvest level is described as a combination of area control with volume constraints.</p> <ul style="list-style-type: none"> ✓ The 10-year (2003-2012) average annual area harvested was 13,271 acres. The annualized goal is 14,337 acres. ✓ The 10-year (2003-2012) average MBF/year of sawtimber & pulpwood harvested from State Forest land was 72,421 MBF/yr, which was less than the target goal of 87,215 MBF/year. ✓ The annual volume goal was exceeded in 2009. This was due to salvaging of dead timber from the 2007-2008 gypsy moth defoliations & resulting mortality. The 10-yr rolling average did not, however, exceed the sustained yield harvest level.
<p>5.6.c. Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across</p>	<p>C</p>	<p>In 1999, BOF formed a partnership with Penn State University’s School of Forest Resources to develop a custom Timber Harvest Scheduling & Planning Model. Constraints in the model are designed to address:</p>

<p>the FMU. Overstocked stands and stands that have been depleted or rendered to be below productive potential due to natural events, past management, or lack of management, are returned to desired stocking levels and composition at the earliest practicable time as justified in management objectives.</p>		<ul style="list-style-type: none"> • Balanced age class distribution • Balanced workflow • Appropriate rotation ages • Forest health • Optimal income within ecosystem constraints • Some older forests ...and other desired conditions. <p>One of the primary objectives of implementing the model was to reduce the volume locked up in older, overstocked stands in order to stimulate growth. (Joe Petrowski, 2011 PPT <i>Timber Harvest Allocation Model</i>)</p> <p>Recently, many oak-hardwood stands have been rendered below productive potential due to Gypsy Moth infestation and drought-related dieback. Salvage harvests have been a high priority, and supplemental planting is being done in stands without adequate natural regeneration. In 2012, DCNR planted 4,576 acres to supplement inadequate natural regeneration.</p>
<p>5.6.d. For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial operations or where traditional or customary use rights may be impacted by such harvests. In other situations, the forest owner or manager utilizes available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.</p>	<p>C</p>	<p>NTFP are not harvested for commercial purposes. Records show that miscellaneous personal use permits are issued for insignificant amounts of lycopodium, sawdust and moss. About \$1,200 was received for stone (shale) removal permits in the last calendar year.</p> <p>Ginseng is a coveted product in many parts of the world. The plant is found on fertile sites scattered throughout state forestland and has been harvested in the past, regulated only by the requirement of a \$5 permit. This practice was discontinued several years ago so BOF could assess the population of the species in the forest and determine if sustainable harvest levels could be established.</p>
<p>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.</p>		
<p>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.</p>	<p>C</p>	

<p>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:</p> <ol style="list-style-type: none"> 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. 	<p>C</p>	<p>DCNR has a 4-page Environmental Review Policy (no date), that supplements a checklist for environmental reviews of timber harvesting. The policy lists projects in a number of categories that include large blocks of artificial regeneration, timber management in wild areas, and insect and disease control in natural areas.</p> <p>DCNR also prepared another 4-page document, entitled “PA Natural Disturbance Regimes,” that directs foresters to consider both natural and manmade disturbance regimes when evaluating stands and considering prescriptions. Interviews with foresters in the field confirmed that most are familiar with the concepts presented in this document.</p> <p>DCNR employees interact frequently with researchers at Penn State University and USDA Forest Service, in an effort to integrate current information and recent science into their planning and management activities.</p> <p>In response to a 2012 Minor CAR related to impact assessments for trails used for narrow-track cross-country motorcycle races on State Forests, DCNR developed internal guidelines that now require completion of State Forest Environmental Reviews for such events.</p>
<p>6.1.b. Prior to commencing site-disturbing activities, the 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.</p> <p>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</p>	<p>C</p>	<p>Auditors examined files of timber sales in three of four districts visited, especially the detailed proposals developed by foresters in anticipation of timber sales. These proposals addressed all the required elements of this indicator, and are further reviewed and approved by Program Specialists and/or the Chief of Silviculture. Timber sale files often contained additional letters from Ecological Services and DEP, addressing unique resources and water protection.</p> <p>PNDI reviews take place as part of the process to review projects taking place on state forest lands for RTE and significant other natural resources (plant communities, terrestrial invertebrates, and geologic features). The Biotics database, which the PA Natural Heritage Program manages, is searched whenever a project is planned on state forest lands.</p>

and minimize risks.		
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	Field inspections confirmed that foresters took care to implement the proposed strategies to avoid negative impacts of site disturbances, and to achieve the long-term objective for healthy forest stands.
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	DCNR, with minor exceptions (see CAR 2013.1) excels in communication. The Department maintains an excellent website that provides an opportunity for the public to view and download an abundance of planning documents in draft and final form.
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	C	The Heritage Program maintains the Pennsylvania Natural Diversity Inventory (PNDI), a repository of occurrence information for plants and animals. Authority over species and resources of concern is divided among DCNR (plants, natural communities, terrestrial invertebrates and geologic features), the Game Commission (birds and mammals) and the Fish and Boat Commission (fish, reptiles and amphibians and aquatic invertebrates). All assessments for site disturbing activities require a check with the PNDI database. The PNDI database has an online tool function which compares species data and project data and provides a receipt summary of potential impacts, or "hits." It also provides clearance on the receipt for any species with which the project is not likely to have a potential impact. Any potential impacts are then reviewed by Ecological Services biologists, who work with the jurisdictional agency on appropriate minimization or other recommendations for the project.

<p>manager of the appropriate database.</p>		
<p>6.2.b. When RTE species are present or assumed to be present, modifications in management are made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats. Conservation zones and/or protected areas are established for RTE species, including those S3 species that are considered rare, where they are necessary to maintain or improve the short and long-term viability of the species. Conservation measures are based on relevant science, guidelines and/or consultation with relevant, independent experts as necessary to achieve the conservation goal of the Indicator.</p>	<p>C</p>	<p>As stated in 6.2.a, the presence of an RTE species or natural community requires consultation and appropriate modifications in harvest plans or other site disturbances, including guidelines for how far away you should be from certain RTE species: such as 300' from a vernal pond with <i>Scirpus</i>. Numerous examples were seen during the audit, most commonly involving the Timber Rattlesnake, a sensitive species on Pennsylvania.</p>
<p>6.2.c. For medium and large public forests (e.g. state forests), forest management plans and operations are designed to meet species' recovery goals, as well as landscape level biodiversity conservation goals.</p>	<p>C</p>	<p>PNDI ecologists estimate that 40% of the state's species of special concern occur on public lands (DCNR Forest Plan). All site-disturbing operations undergo some level of assessment for species of concern, in addition to the comprehensive planning processes that have led to establishment of bioreserves to protect species, communities, and landscapes. Keystone species have been identified in the management plans, as have special areas for birds, mammals, and amphibians.</p>
<p>6.2.d. Within the capacity of the forest owner or manager, hunting, fishing, trapping, collecting and other activities are controlled to avoid the risk of impacts to vulnerable species and communities (See Criterion 1.5).</p>	<p>C</p>	<p>Conservation Officers of the Game Commission, Fish and Boat Commission, and Department of Environmental Protection cooperate with managers to regulate consumptive activities on state forests.</p>
<p>C6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.</p>	<p>C</p>	
<p>C6.3.a. Landscape-scale indicators</p>		
<p>6.3.a.1. The forest owner or manager maintains, enhances, and/or restores under-represented successional stages in the FMU that would naturally occur on the types of sites found on the FMU. Where</p>	<p>C</p>	<p>A sophisticated timber harvest allocation model has been developed with a goal of allocating a diversity of successional stages in different forest types across the portion of the forest allocated for multiple resource management. Much of the remaining forest acreage is allocated to management by natural processes. Old-growth forests have been identified and</p>

<p>old growth of different community types that would naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance and/or restore old growth characteristics.</p>		<p>protected.</p>
<p>6.3.a.2. When a rare ecological community is present, modifications are made in both the management plan and its implementation in order to maintain, restore or enhance the viability of the community. Based on the vulnerability of the existing community, conservation zones and/or protected areas are established where warranted.</p>	<p>C</p>	<p>The management planning process is based on ecological land types and land type associations. Within land types, natural communities are identified and managed appropriately. The PNDI database has spatial information for communities that are rare. Where these occur in multiple resource areas, assessments prior to site disturbances trigger consultation with ecologists in Ecological Services.</p>
<p>6.3.a.3. When they are present, management maintains the area, structure, composition, and processes of all Type 1 and Type 2 old growth. Type 1 and 2 old growth are also protected and buffered as necessary with conservation zones, unless an alternative plan is developed that provides greater overall protection of old growth values.</p> <p>Type 1 Old Growth is protected from harvesting and road construction. Type 1 old growth is also protected from other timber management activities, except as needed to maintain the ecological values associated with the stand, including old growth attributes (e.g., remove exotic species, conduct controlled burning, and thinning from below in dry forest types when and where restoration is appropriate).</p> <p>Type 2 Old Growth is protected from harvesting to the extent necessary to maintain the area, structures, and functions of the stand. Timber harvest in Type 2 old growth must maintain old growth structures, functions, and</p>	<p>C</p>	<p>Forest Planners from DCNR report that the only identified Type 1 old-growth forest in Pennsylvania is in a state park. State forest lands contain a number of sites where Type 2 old growth is found, and even more sites where structure typical of an old growth forest has been identified. These sites are protected through their classification as natural areas. In the 2003 management plan, it is a stated goal to have a state forest bioreserve system. It is not clear if the analysis to support the entire system of bioreserves is complete, but all old growth forests have been classed as category 3.2 HCVF, and total almost 20,000 acres (Table of HCVF Areas, 2013).</p>

<p>components including individual trees that function as refugia (see Indicator 6.3.g).</p> <p>On public lands, old growth is protected from harvesting, as well as from other timber management activities, except if needed to maintain the values associated with the stand (e.g., remove exotic species, conduct controlled burning, and thinning from below in forest types when and where restoration is appropriate). On American Indian lands, timber harvest may be permitted in Type 1 and Type 2 old growth in recognition of their sovereignty and unique ownership. Timber harvest is permitted in situations where:</p> <ol style="list-style-type: none"> 1. Old growth forests comprise a significant portion of the tribal ownership. 2. A history of forest stewardship by the tribe exists. 3. High Conservation Value Forest attributes are maintained. 4. Old-growth structures are maintained. 5. Conservation zones representative of old growth stands are established. 6. Landscape level considerations are addressed. 7. Rare species are protected. 		
<p>6.3.b. To the extent feasible within the size of the ownership, particularly on larger ownerships (generally tens of thousands or more acres), management maintains, enhances, or restores habitat conditions suitable for well-distributed populations of animal species that are characteristic of</p>	<p>C</p>	<p>Maintenance or establishment of habitat conditions for a diverse, healthy population of animals is a clearly stated objective of the forest plan. Keystone species are identified in the management plan, as are indicator species for certain habitat conditions. Wildlife biologists (e.g., Emily Just) within the Department work with district foresters to develop habitat conditions for wildlife species featured in the Commonwealth’s Wildlife Action Plan.</p>

<p>forest ecosystems within the landscape.</p>		
<p>6.3.c. Management maintains, enhances and/or restores the plant and wildlife habitat of Riparian Management Zones (RMZs) to provide:</p> <ul style="list-style-type: none"> a) habitat for aquatic species that breed in surrounding uplands; b) habitat for predominantly terrestrial species that breed in adjacent aquatic 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. 	<p>C</p>	<p>Riparian Management Zones are featured mostly in documents that relate to Best Management Practices for roads, trails, timber sales, etc. The Silviculture Manual establishes protective zones for riparian areas of different types, with different specifications for a variety of water or wetland types (See 6.e.1 for more detail).</p>
<p>Stand-scale Indicators 6.3.d Management practices maintain or enhance plant species composition, distribution and frequency of occurrence similar to those that would naturally occur on the site.</p>	<p>C</p>	<p>Notwithstanding serious over-browsing by white-tailed deer in recent decades, most forest stands are stocked with a mix of species that would be found on the site. Plantations are rare on state forest land. Regeneration guidelines are based on supporting forest composition that would be expected on the site. Hundreds of stands on the forest have been protected from deer browsing by erecting tall fences to exclude most deer. On sites visited during the audit, the benefits of this effort were obvious, judging by regeneration of desirable species in the understory.</p>
<p>6.3.e. When planting is required, a local source of known provenance is used when available and when the local source is equivalent in terms of quality, price and productivity. The use of non-local sources shall be justified, such as in situations where other management objectives (e.g. disease resistance or adapting to climate change) are best served by non-local sources. Native species suited to the site are normally selected for regeneration.</p>	<p>C</p>	<p>Where planting is done, and it is not widespread, seedlings are acquired from a state forest nursery, and seeds are from local sources when possible.</p>
<p>6.3.f. Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and</p>	<p>C</p>	<p>Following detailed guidelines from the Silviculture Manual, state lands foresters are well acquainted with the important of maintaining structure in stands harvested for timber. Timber sales inspected during the audit exhibited abundant snags,</p>

<p>distribution that could be expected from naturally occurring processes. These components include:</p> <p>a) large live trees, live trees with decay or declining health, <i>snags</i>, and well-distributed coarse down and dead woody material. Legacy trees where present are not harvested; and</p> <p>b) vertical and horizontal complexity.</p> <p>Trees selected for retention are generally representative of the dominant species found on the site.</p>		<p>legacy trees, clumps of retained trees, and downed woody debris. Interviews with foresters confirmed their understanding of the important of retention and the spatial distribution of retained trees.</p>
<p>6.3.g.1 In the Southeast, Appalachia, Ozark-Ouachita, Mississippi Alluvial Valley, and Pacific Coast Regions, when even-aged systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit as described in Appendix C for the applicable region.</p> <p>In the Lake States Northeast, Rocky Mountain and Southwest Regions, when even-aged silvicultural systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime unless retention at a lower level is necessary for the purposes of restoration or rehabilitation. See Appendix C for additional regional requirements and guidance.</p>	<p>C</p>	<p>Shelterwood systems for harvest and regeneration are used most commonly on state forest lands. Sites inspected during the audit consistently showed trees live trees retained after the overstory removal phase of the shelterwood. One exception was a 96-acre overstory removal conducted in cooperation with research being conducted by the USFS. Managers were quick to point out that the systematic spacing of live trees retained in the harvest areas was part of the research design and not standard procedure on state forests.</p>
<p>6.3.g.2 Under very limited situations, the landowner or manager has the option to develop a qualified plan to allow minor departure from the opening size limits described in Indicator 6.3.g.1. A qualified plan:</p> <ol style="list-style-type: none"> 1. Is developed by qualified experts in ecological and/or related fields (wildlife biology, 	<p>C</p>	<p>No examples were seen during the field audit. However, the detailed review that all timber sale proposals receive would ensure that any plan developed that deviated from standards for opening size would receive a multi-disciplinary review within DCNR.</p>

<p>hydrology, landscape ecology, forestry/silviculture).</p> <ol style="list-style-type: none"> 2. Is based on the totality of the best available information including peer-reviewed science regarding natural disturbance regimes for the FMU. 3. Is spatially and temporally explicit and includes maps of proposed openings or areas. 4. Demonstrates that the variations will result in equal or greater benefit to wildlife, water quality, and other values compared to the normal opening size limits, including for sensitive and rare species. 5. Is reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings. 		
<p>6.3.h. The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control invasive species, including:</p> <ol style="list-style-type: none"> 1. a method to determine the extent of invasive 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, 	<p>C</p>	<p>DCNR had developed an impressive Invasive Species Management Plan (2011). It was the product of the Invasive Species Team, involving personnel from across the agency. The plan sets out goals and objectives, methods for preventing introduction and spread, surveys and detection, control and restoration. Recent shale gas development has led to an expanded monitoring program in DCNR, with about 15 FTEs across the department allocated to monitoring.</p>

<p>4. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species.</p>		
<p>6.3.i. In applicable situations, the forest owner or manager identifies and applies site-specific fuels management practices, based on: (1) natural fire regimes, (2) risk of wildfire, (3) potential economic losses, (4) public safety, and (5) applicable laws and regulations.</p>	<p>C</p>	<p>DCNR is the agency that leads fire prevention and suppression efforts for all forests in Pennsylvania. The agency also uses controlled burning to maintain selected plant communities and to aid in regeneration of some forest species.</p>
<p>C6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.</p>	<p>C</p>	
<p>6.4.a. The forest owner or manager documents the ecosystems that would naturally exist on the FMU, and assesses the adequacy of their representation and protection in the <i>landscape</i> (see Criterion 7.1). The assessment for medium and large forests include some or all of the following: a) <i>GAP analyses</i>; b) collaboration with state natural heritage programs and other public agencies; c) regional, landscape, and watershed planning efforts; d) collaboration with universities and/or local conservation groups.</p> <p>For an area that is not located on the FMU to qualify as a Representative Sample Area (RSA), it should be under permanent protection in its natural state.</p> <p>.</p>	<p>C</p>	<p>DCNR has adopted a program of landscape classification using ecological land types and land type associations. Management plans developed for each district present the land types present in their district and the ecological communities present within each land type. Many of the rare communities and representative samples of more common communities have been classified in one of several categories of high conservation value, notably Natural Areas, Wild Plant Sanctuaries, Wild Areas, or natural communities described and mapped by the Natural Heritage Program. Most recently, in 2011, earlier work to designate a specific bioserve system on state lands was folded into the classification and identification of HCVF areas.</p>
<p>6.4.b. Where existing areas within the landscape, but external to the FMU, are not of adequate protection, size, and configuration to serve as representative samples of existing ecosystems, forest</p>	<p>C</p>	<p>DCNR has established RSAs for purpose 2 and 3 within the state forest system, and does appear to have looked beyond state-owned land to fill gaps in the reserve network. See 6.4.d for more on this process.</p>

<p>owners or managers, whose properties are conducive to the establishment of such areas, designate ecologically viable RSAs to serve these purposes.</p> <p>Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.</p>		
<p>6.4.c. Management activities within RSAs are limited to low impact activities compatible with the protected RSA objectives, except under the following circumstances:</p> <ul style="list-style-type: none"> a) harvesting activities only where they are necessary to restore or create conditions to meet the objectives of the protected RSA, or to mitigate conditions that interfere with achieving the RSA objectives; or b) road-building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the RSA was designated. 	C	<p>Most of the RSAs have been provided special classes of protection or management to conserve the attributes that led to their identification. Some of the more common forest types are managed to produce a mix of age classes and to maintain the desired species composition.</p>
<p>6.4.d. The RSA assessment (Indicator 6.4.a) shall be periodically reviewed and if necessary updated (at a minimum every 10 years) in order to determine if the need for RSAs has changed; the designation of RSAs (Indicator 6.4.b) is revised accordingly.</p>	C	<p>The effort to develop a bioserve system of representative samples of ecosystems on state forests seems to have been consumed into the more recent effort to classify HCV forest areas. In addition to representative communities in the multiple resource management areas of state forests, the many natural communities that are protected and managed as HCVF may well fulfill the goals of identifying and protecting representative samples of ecosystems across the landscape. A periodic review of the RSA assessment should be part of the current effort to update the DCNR Forest Plan.</p>
<p>6.4.e. Managers of large, contiguous public forests establish and maintain a network of representative protected areas sufficient in size to maintain species dependent on interior core habitats.</p>	C	<p>Many of the Natural Areas and Wild Areas are of significant size to provide interior core habitats, e.g., more than 29 different Wild Areas exceed 1000 acres in size, and the largest is more than 20,000 acres. Five Natural Areas exceed 2000 acres.</p>
<p>C6.5. Written guidelines shall be</p>		

<p>prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.</p>		
<p>6.5.a. The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.</p>	<p>C OBS</p>	<p>Issue: DCNR does have written guidelines for control of erosion, road construction, and protection of water resources. However, the auditors found that these guidelines were scattered in a variety of publications from a number of agencies (e.g., PA Dept. of Environmental Protection, Penn State, assorted statutes, DCNR manuals, contract clauses, etc.). When questioned about where to find Best Management Practices for soil and water conservation, employees suggested different resources, with little consistency in their responses. Auditors found this confusing and concluded that DCNR staff may not be as familiar as they should be with such guidelines.</p> <p>Observation 2013.2: Conformance with FSC-US Forest Management Standard could be improved if the Bureau of Forestry were to refresh training and develop a guide to summarize the compendium of information resource managers must consider to control erosion and minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.</p>
<p>6.5.b. Forest operations meet or exceed Best Management Practices (BMPs) that address components of the Criterion where the operation takes place.</p>	<p>C</p>	<p>Despite concerns expressed above, site inspections revealed attention to measures to prevent erosion and sedimentation.</p> <p>Twelve forest harvest sites were visited by the audit team. Most of the sites were on gently sloping land, and most were on relatively dry sites. All sites illustrated considerable attention to efforts to protect soil and to avoid erosion. Foresters carefully prescribed logging equipment to be used in several cases, in order to protect soils and advanced regeneration. Only minor rutting was observed, and that was on a site that has not yet been closed out. Whole tree harvesting is rarely used on state forest lands, even in salvage harvests.</p> <p>Timber sale contracts include “SPECIAL REQUIREMENTS NO. 8 EROSION AND SEDIMENT CONTROL PLAN”, which details road and trail BMP precautions.</p> <p>The LIMITED RESOURCE MANAGEMENT ZONE is applied to areas where management alternatives are limited due to site quality or topographic constraints. Recreation, aesthetics, water, and soil protection are the primary values. This zone is typically not part of the commercial forest land base, since timber harvesting is usually not practical.</p>
<p>6.5.c. Management activities</p>	<p>C</p>	<p>As noted above, operations viewed in site visits demonstrated</p>

<p>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:</p> <ul style="list-style-type: none"> • Slash is concentrated only as much as necessary to achieve the goals of site preparation and the reduction of fuels to moderate or low levels of fire hazard. • Disturbance of topsoil is limited to the minimum necessary to achieve successful regeneration of species native to the site. • Rutting and compaction is minimized. • Soil erosion is not accelerated. • Burning is only done when consistent with natural disturbance regimes. • Natural ground cover disturbance is minimized to the extent necessary to 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. 	<p>OBS</p>	<p>satisfactory attention to elements of this indicator, although interviews with DCNR foresters indicated confusion about where the related guidance can be found.</p> <p>See OBS in 6.5.a.</p>
<p>6.5.d. The transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, maintained,</p>	<p>C</p>	<p>Auditors found that road design, construction, and maintenance were of high quality. Recreational trails also were well planned and constructed. On forests where shale gas drilling has been active, managers have worked with oil and gas companies to upgrade roads to accommodate the increased traffic of heavy vehicles.</p>

<p>and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects, while allowing for customary uses and use rights. This includes:</p> <ul style="list-style-type: none"> • access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts; • road density is minimized; • erosion is minimized; • sediment discharge to streams is minimized; • there is free upstream and downstream passage for aquatic organisms; • impacts of transportation systems on wildlife habitat and migration corridors are minimized; • area converted to roads, landings and skid trails is minimized; • habitat fragmentation is minimized; • unneeded roads are closed and rehabilitated. 		
<p>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.</p> <p>In the Appalachia, Ozark-Ouachita,</p>	<p>C</p>	<p>Chapter II of the Silviculture Manual (undated), Water Resources, presents clear guidelines for buffers to protect rivers and streams, vernal pools and seeps, and shorelines of lakes and ponds. The manual lists buffers for wetlands as being under development. Except for the lack of guidelines for wetlands, standards are quite specific, with different buffer requirements for a variety of water resources, e.g., wilderness trout streams, wild rivers, scenic rivers, high quality perennial streams, vernal pools, and spring seeps.</p>

<p>Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.</p>		
<p>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.</p>	<p>C</p>	<p>No such variations were evident. On the contrary, SMZ buffers for state forest lands exceed some of the standards seen elsewhere in the region.</p>
<p>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.</p>	<p>C</p>	<p>Any such crossings on state forest lands must be permitted by Department of Environmental Protection. Auditors did not have opportunity to inspect any instances of a permitted crossing, but did note mention of one such permit request.</p>
<p>6.5.g. Recreation use on the FMU is managed to avoid negative impacts to soils, water, plants, wildlife and wildlife habitats.</p>	<p>C</p>	<p>Recreation on state forests is a major activity and an important program focus. Auditors were exposed to numerous examples where recreational use has been altered to avoid negative impacts to important resources such as soil and water.</p>

		Examples of recent modifications to protect resources include a new policy for consulting the PDNI database before allowing motorbike races (DCNR wide); and moving campsites away from river banks (Districts 9 and 13).
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.	C	There is no provision for grazing on state forest lands.
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	DCNR has a well-developed system for tracking the use of chemical pesticides, beginning with a web-based Chemical Application Tracking Database, where an initial request for use of chemicals to control insects or plants is submitted. Conspicuously displayed on web page is a link for the list of FSC prohibited pesticides. Numerous interviews with DCNR staff during the assessment confirmed that personnel involved with use of chemicals are well aware of the prohibited products. None has been used on state forest lands.
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	C	In 2006, to achieve conformance with FSC standards, DCNR revamped their system for approving and tracking chemical use for various purposes on state forests. An initial application for use of chemicals requires the applicant to propose other methods of controlling pests and justify a chemical approach. Interviews during the assessment (e.g., Carrie Gilbert) confirmed that DCNR staff explore numerous ways to reduce chemical use.

<p>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.</p> <p>Written strategies are developed and implemented that justify the use of chemical pesticides.</p> <p>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.</p>		
<p>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.</p>	C	<p>DCNR has a robust Division of Forest Pest Management, comprised of almost 20 professional employees. In addition to the Silviculture team, auditors found, during interviews, that personnel are quite aware of appropriate methods, of applications and potential hazards to non-target species. These same professionals are well-connected with other resources at Penn State University and USFS. Any widespread applications are done by approved contractors (sample contract inspected during audit).</p>
<p>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.</p> <p>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</p>	C	<p>Most chemical applications on state forest lands are contracted to approved pesticide applicators. An example 2013 contract for chemical treatment of undesirable understory species was examined. The contract was for 1561 acres in 12 different spray blocks. Precautions, methods of application and amounts, and required training were all spelled out in detail.</p> <p>For smaller applications, e.g., small patches of invasive plants, DCNR employees are required to submit the Chemical Tracking Application, which includes a map or specific description of the treatment site.</p>

non-target species and sites.		
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 of worker exposure to chemicals.	C	Monitoring for effects of control of insect pests is conducted routinely by surveys conducted by the Division of Forest Pest Management. For silviculture use, repeated visits to forest stands are routine. Chemical tracking reports also report on success of previous applications.
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	DCNR employees receive extensive training in numerous aspects of safety and hazardous materials (training records examined). Logging contractors are required to complete SFI-sponsored training. Inspection of one storage and maintenance facility (District 13) confirmed appropriate equipment. Spill kits are expected to be in trucks used by district foresters (one truck inspected was in compliance) and a written procedure exists (2 pages, no date), Spill Response and Cleanup Procedures.
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	No spills were observed during the audit. Machinery was inspected on three harvest sites, and found to be free of spills. On one active logging operation, the contractor had a spill kit on site. Auditors were told of substantial spills of contaminated waste water used in the drilling and fracking of gas wells, on state forest lands. Both instances involved stream pollution and fell under the jurisdiction of Department of Environmental Protection.
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	Auditors inspected the facility for chemical storage in District 13, as well as the maintenance garage. Hazardous materials were properly contained and managed. Inspection reports were posted.
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	

<p>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.</p>	<p>C</p>	<p>As described in 6.6.b, DCNR has well qualified experts who direct the control of invasive plants. Use of biological control agents has not been widespread, except for the control of gypsy moth, where DCNR’s policy is to use only <i>Bacillus thuringiensis</i>, a well-researched and often used treatment (interview with D. Egge).</p>
<p>6.8.b. If biological control agents are used, they are applied by trained workers using proper equipment.</p>	<p>C</p>	<p>DCNR policies for safety assure conformance with the indicator.</p>
<p>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.</p>	<p>C</p>	<p>Written plans demonstrate conformance with this indicator, and such plans are posted on the DCNR web site. DCNR personnel coordinated experimental release of parasitoids for potential control of Emerald Ash Borer at two state parks in 2012, but not on state forest lands (Forest Health Report, 2012).</p>
<p>6.8.d. Genetically Modified Organisms (GMOs) are not used for any purpose</p>	<p>C</p>	<p>No evidence was found that GMOs have been used for any purpose on state forest lands. DCNR personnel are aware of this FSC standard and stated that GMOs have not been used.</p>
<p>C6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.</p>	<p>C</p>	
<p>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.</p>	<p>C</p>	<p>DCNR has an 18-page document entitled, “Planting and Seeding Guidelines on State Forestlands”. It is an undated document, but appears to be recent judging from some of the recommendations. The document presents abundant cautions for seed mixes and nursery stock, especially non-woody plants used to stabilize bare soils and in food plots for wildlife. Exotic species are used almost exclusively for erosion control or as food for wildlife, with care taken to prevent invasive species. Norway spruce is one exotic tree that has been planted and is being considered as a possible replacement for hemlock trees lost to disease. The current recommendation, however, is to avoid this species.</p>
<p>6.9.b. If exotic species are used,</p>	<p>C</p>	<p>Written guidelines mentioned above address the need to</p>

<p>their provenance and the location of their use are documented, and their ecological effects are actively monitored.</p>		<p>document both provenance and location of use. Each district submits, annually, a detailed list of all plantings on the district (list for 2012 inspected during audit). Botanists in Ecological Services Section are actively involved in determining ecological effects.</p>
<p>6.9.c The forest owner or manager shall take timely action to curtail or significantly reduce any adverse impacts resulting from their use of exotic species</p>	<p>C</p>	<p>DCMR's extensive program for monitoring and controlling invasive species should assure that any adverse impact from planting exotic species is addressed.</p>
<p>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.</p>	<p>C</p>	
<p>6.10.a Forest <i>conversion</i> to non-forest land uses does not occur, except in circumstances where conversion entails a very limited portion of 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).</p>	<p>C</p>	<p>Pennsylvania state forests have had a history of natural gas extraction since 1947, but production of gas has accelerated in recent years with the development of horizontal drilling technology and hydraulic fracturing. Marcellus Shale underlies about 1.5 million of the 2.2 million acres of state forest, and about 700,000 of those acres are available for natural gas development. Approximately 385,400 of those acres are leased (many leases are old), for gas production including shale gas. At present, there is a moratorium—issued by the Governor—on further leases. Although the total acreage of land leased is about 6% of the state forest enterprise, a small percentage of that represents acres converted to non-forest uses for well pads, pumping stations, pipeline corridors, roads, etc. This is within the allowable percentage of conversion in the FSC standard.</p>
<p>6.10.b Forest <i>conversion</i> 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).</p>	<p>C</p>	<p>It is the clear policy of DCNR that conversion to non-forest uses does not occur on HCVF, Wild Areas, Natural Areas, or sensitive ecological and recreational areas. This includes leases those areas for natural gas and oil (Fact Sheet, December 2012, DCNR web site).</p>
<p>6.10.c Forest <i>conversion</i> to non-forest land uses does not occur, except in circumstances where conversion will enable clear, substantial, additional, secure, long term conservation benefits across</p>	<p>C</p>	<p>DCNR is charged with managing the state forest system for many uses and values, including natural gas. Leaders of the Commonwealth have directed the Department to initiate leasing and to cease leasing in recent years. DCNR formally states a commitment to manage natural gas development in a way that ensures long-term health of the forest and maintains</p>

<p>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).</p>		<p>FSC certification. The audit team did recognize some positive indicators of recent gas development, notably road and trail improvements, excellent development of new interpretive and educational programs and facilities, and a boost in hiring of qualified staff. DCNR is now financed primarily by revenue from gas royalties.</p>
<p>6.10.d Natural or semi-natural stands are not converted to plantations. Degraded, semi-natural stands may be converted to restoration plantations.</p>	<p>C</p>	<p>DCNR is not planting in a way to create plantations. Tree planting does occur, but almost always to supplement natural regeneration. Planting sometimes takes place before harvest of the overstory, but also after removal of the overstory. A variety of species is planted, both hardwoods and softwoods.</p>
<p>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)</p>	<p>C</p>	<p>Where type conversions occur, it is to return to a stand type that is more appropriate to the site and has an historical precedent. This is in conformance with the management plan.</p>
<p>6.10.f Areas converted to <i>non-forest use</i> 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.</p>	<p>C</p>	<p>There are about 290,000 acres of state forest lands where rights to natural gas are owned by someone other than the Commonwealth (severed rights). Gas wells are being developed on some of these acres, but District Foresters described to the audit team their successes in working with gas companies to improve roads, relocate roads or recreation trails, etc. DCNR has, to date, identified 177 acres of land disturbed by gas-drilling operations that will be excised from FSC certification.</p>
<p>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.</p>		
<p>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</p>	<p>C</p>	

<p>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.</p>		
<p>7.1.a. The management plan identifies the ownership and legal status of the FMU and its resources, including rights held by the owner and rights held by others.</p>	<p>C</p>	<p>The Division of Field Engineering provides real estate services to the agency, including maintenance of deeds, leases and easements. Related mapping information is available as GIS data.</p> <p>The bureau owns subsurface rights to roughly 85 percent of the state forest. The bureau does not own subsurface rights to roughly 428,920 acres of the state forest. Subsurface ownership areas are defined by deeds and maps maintained by the Minerals Section of the Bureau of Forestry (SFRMP 2003, pg 295)</p>
<p>7.1.b. The management plan describes the history of land use and past management, current forest types and associated development, size class and/or successional stages, and natural disturbance regimes that affect the FMU (see Indicator 6.1.a).</p>	<p>C</p>	<p>These elements are covered adequately in existing DCNR 2003/2007 management planning documents. Each of the 12 core sections contains an introduction, history, inventory, policy statement, goals, objectives, guidelines or actions, monitoring indicators of sustainability, and critical research needs. Each State Forest District is also represented with detailed information in the plan.</p> <p>Cover type, size class and related data are available through the Bureau of Forestry Mapping Systems – FIMS.</p> <p>Successional stages and natural disturbance are also addressed by the state natural heritage program administered by DCNR.</p>
<p>7.1.c. The management plan describes: a) current conditions of the timber</p>	<p>C</p>	<p>The SFRMP and stand level operational plans address these terms.</p>

<p>and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions.</p>		
<p>7.1.d. The management plan includes a description of the landscape within which the FMU is located and describes how landscape-scale habitat elements described in Criterion 6.3 will be addressed.</p>	<p>C</p>	<p>Each of the State Forest district plans address the landscape within which it is located. The Pennsylvania ECOMAP consortium endorsed and adapted the concepts of the U.S. Forest Service National Hierarchical Framework of Ecological Units (ECOMAP 1993). The Forest Service, in cooperation with the Bureau of Forestry, brokered the delineation of ecological units within the Commonwealth and across state boundaries through the first five levels of the hierarchy: domain, division, province, section, and subsection. The Bureau of Forestry coordinated the delineation of the lower levels of the hierarchy, ecological land type (ELT) and land type association (LTA) on and adjacent to state forest lands. These two levels, ELT and LTA, bear directly on resource management and planning.</p> <p>See also: Appendix 5A-Priority Landscapes GIS Analysis Methodology Appendix 5B-Priority Landscapes GIS Analysis Data Sets Appendix 5C-Forest Legacy Statewide Assessment of Need</p>
<p>7.1.e. The management plan includes a description of the following resources and outlines activities to conserve and/or protect:</p> <ul style="list-style-type: none"> • rare, threatened, or endangered species and natural communities (see Criterion 6.2); • plant species and community diversity and wildlife habitats (see Criterion 6.3); • water resources (see Criterion 6.5); • soil resources (see Criterion 6.3); • Representative Sample Areas (see Criterion 6.4); • High Conservation Value Forests (see Principle 9); • Other special management areas. 	<p>C</p>	<p>The elements required by the indicator are addressed in the 2003/2007 SFRMP and the compendium of documents the state uses to support the plan.</p> <p>See DCNR sites for:</p> <ul style="list-style-type: none"> • Rare, threatened, or endangered species and natural communities • Appendix 4D1-Projected Habitat Maps for Pennsylvania for 36 Tree Species (Softwoods) • Appendix 4D2-Projected Habitat Maps for Pennsylvania for 36 Tree Species (Hardwoods) • Appendix 4H-State Wildlife Action Plan Summaries • Water Resource Reports • Soil Resources • Representative Sample Areas • High Conservation Value Forests
<p>7.1.f. If invasive species are present, the management plan describes invasive species</p>	<p>C</p>	<p>The threats associated with invasive species are addressed throughout the SFRMP. The DCNR Internet includes multiple resources in relation to invasive species issues, including control</p>

<p>conditions, applicable management objectives, and how they will be controlled (see Indicator 6.3.j).</p>		<p>plans. Action plans for specific species (e.g., emerald ash borer, gypsy moth) are developed in cooperation with the Pennsylvania Department of Agriculture.</p>
<p>7.1.g. The management plan describes insects and diseases, current or anticipated outbreaks on forest conditions and management goals, and how insects and diseases will be managed (see Criteria 6.6 and 6.8).</p>	<p>C</p>	<p>DCNR protects Pennsylvania's forests, both public and private, from harmful insects, diseases, and other destructive agents. The Bureau of Forestry promotes programs to improve and maintain the long-term health and biodiversity of forest ecosystems. The bureau evaluates factors affecting the health of trees and woodlands, utilizes integrated pest management techniques to mitigate the effects of destructive agents, and promotes forest health to the public.</p> <p>See Forest Health components of the SFRMP (2003) on pages 96-108.</p> <p>Various aspects of the forest health program are described on the DCNR Internet, including:</p> <ul style="list-style-type: none"> • Advisories • Asian Long horned Beetle • Emerald Ash Borer • Forest Tent Caterpillar • . • Gypsy Moth • Hemlock Woolly Adelgid • Diseases • Forest Health Fact Sheets • Annual Forest Health Reports <p>Bureau of Forestry - Division of Forest Pest Management maintains a biennial Strategic Plan 2011 – 2013.</p>
<p>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.</p>	<p>C</p>	<p>These elements are covered in the “DCNR COOPERATIVE FOREST INSECT PEST SUPPRESSION PROGRAM OPERATING PROCEDURE AND DEADLINES MANUAL” (May 2003).</p> <p>Also see the DCNR Invasive Species Management Plan and related Internet Pages.</p>
<p>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.</p>	<p>C</p>	<p>These elements are addressed in the SFRMP and related plan compendium documents. See Forest Health components of the SFRMP (2003) on pages 96-108; Annual Forest Health Reports; the DCNR Invasive Species Management Plan.</p> <p>DCNR uses biological controls under the oversight of the US Department of Agriculture – Animal and Plant Health Inspection</p>

		Service (USDA APHIS).
<p>7.1.j. The management plan incorporates the results of the evaluation of social impacts, including:</p> <ul style="list-style-type: none"> • traditional cultural resources and rights of use (see Criterion 2.1); • potential conflicts with customary uses and use rights (see Criteria 2.2, 2.3, 3.2); • management of ceremonial, archeological, and historic sites (see Criteria 3.3 and 4.5); • management of aesthetic values (see Indicator 4.4.a); • public access to and use of the forest, and other recreation issues; • local and regional socioeconomic conditions and economic opportunities, including creation and/or maintenance of quality jobs (see Indicators 4.1.b and 4.4.a), local purchasing opportunities (see Indicator 4.1.e), and participation in local development opportunities (see Indicator 4.1.g). 	C	<p>DCNR’s compendium of management plan documents includes the 2010 Statewide Forest Assessment, which addresses the elements of the indicator. The department also has policies that address laws on historic preservation. SFRMPs consider these elements. PennState conducts economic development studies, including opportunities related to oil and gas development on State Forests. Planned activities on state lands are responsive to regional economic goals.</p>
<p>7.1.k. The management plan describes the general purpose, condition and maintenance needs of the transportation network (see Indicator 6.5.e).</p>	C	<p>The SFRMP includes at least 132 references to roads infrastructure including considerations such as proximity to water resources, access for recreational purposes, gas and oil extraction, timber harvest activities, etc. Individual State Forest addendums also include transportation network information. DCNR’s Forest Information Management System (FIMS) is used to manage data related to the transportation system.</p>
<p>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.</p>	C	<p>The SFRMP includes a Silviculture/Timber Management Section on pages 243-274. The bureau also has a separate Silviculture Handbook with detailed prescriptions by timber type.</p>
<p>7.1.m. The management plan describes how species selection</p>	C	<p>Prior to 2003, timber harvest targets were based on the total number of acres in the district’s commercial land base and a</p>

<p>and harvest rate calculations were developed to meet the requirements of Criterion 5.6.</p>	<p>statewide 100-year rotation length. With a shift in focus on ecological principles beginning with the 2003/2007 plan, bureau managers recognize that forest communities mature at varied rates. The bureau is now committed to scheduling harvests over a range of rotation ages rather than adhering to one set rotation length. Additionally, the current forest has a large inventory of trees in later successional stages. Recognizing that the old forest structure was not sustainable for the long term, the SFRMP begins balancing the age class distribution of the forest by regenerating forested stands, improving growth, balancing age classes and ensuring that areas of forest are managed on longer rotations for biodiversity.</p> <p>The Bureau of Forestry formed a partnership with the Pennsylvania State University's School of Forest Resources (PSU) in 1999 to develop a harvest scheduling model for planning harvests on each of the 20 forest districts. The goals specifically addressed by the model include:</p> <ol style="list-style-type: none"> 1. To promote and maintain desired landscape conditions; including balancing the age class distribution of the multiple resource, commercial land base. 2. To ensure and maintain areas of older forest. 3. To provide economic and social benefits through a sustained yield of forest products. 4. To determine sustainable long-term timber harvest levels. 5. To promote silvicultural practices that sustain ecological and economic forest values. 6. To develop feasible timber management plans considering forest regeneration issues and resources available to the Bureau of Forestry. <p>This forest modeling approach develops district-specific timber management plans that consider:</p> <ul style="list-style-type: none"> • Planning on a large scale - 10,000's to 100,000's of acres of forestland • Creating and maintaining diverse forests composed of many forest community types with varying site quality, ages, and stocking levels • Long-range planning horizons (140-years or more) • Specific short-term harvest goals (10 years) • Bureau of Forestry policy issues • Forest resource limitations <p>The 26 terrestrial forest types listed in the Phase One Inventory Manual were aggregated into seven forest types to facilitate the development of the yield tables for the timber allocation model:</p> <ol style="list-style-type: none"> 1. Northern hardwoods: northern hardwoods and sugar maple-basswood types 2. Allegheny hardwoods: black cherry-northern hardwoods type
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		<ol style="list-style-type: none"> 3. Red maple: red maple type 4. Red oak: red oak-mixed hardwood type 5. Other oaks: dry oak-heath and dry oak-mixed hardwood types 6. Conifers: hemlock (white pine), dry white pine (hemlock)-oak, hemlock (white pine)-northern hardwood, hemlock (white pine)-red oak-mixed hardwood, hemlock-tuliptree-birch, hemlock-rich mesic hardwood, pine plantation, and spruce plantation types 7. Other hardwoods (all other types) <p>The individual State Forest plans explain how the Harvest Allocation Model is applied in each forest district. Data for the model is maintained in FIMS.</p>
<p>7.1.n. The management plan includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.</p>	<p>C</p>	<p>The Landscape Examination is the primary planning tool for verifying management zoning and vegetation typing, for identifying critical landscape features and opportunities, and for identifying candidate areas for management activities in implementing the State Forest Resource Management Plan.</p> <p>The Landscape Examination is designed to collect basic silvicultural, ecological, recreation and cultural information to facilitate long-term planning for each of these opportunities and to monitor changes occurring at the landscape level. The Bureau’s goal is for landscapes to be examined at least once every ten years. However, due to special circumstances such as natural disturbances or district staffing situations, some landscapes may go longer than 10 years between examinations, but no landscape will go more than 15 years. The intent is to ensure that information used for developing and implementing the State Forest Resource Management Plan 5-year cycle is current.</p> <p>The State Forests are monitored with CFI plots. Cycle 3 started in 2009 with 1,704 plots, which are re-measured on a 5-year cycle.</p> <p>The SFRMP includes sections on flora and fauna inventories and monitoring.</p> <p>The plan includes State Forest Environmental Reviews for site disturbing activities. Separate monitoring guidelines have been developed for oil and gas developments. Social impacts are monitored through the Statewide Forest Action Plan.</p> <p>Costs, productivity and efficiency of forest management are monitored through the biennial budget process, BOF Statistical Reports, the SFRMP planning process and internal reviews. Costs and revenues are monitored utilizing the Commonwealth's financial system, SAP, at all levels from the</p>

		Governor's Office to the district office. Fiscal year spending plans are developed utilizing formulas and funding requests. The Business Manager has overall responsibility for monitoring financial activities and does so through reports, meetings, and presentations on current and projected costs and revenues.
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	PA DCNR has a robust GIS system in FIMS that covers all mapping requirements. A suite of web applications provide public interactive map-based access to a variety of DCNR geographic datasets.
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.	C	The SFRMP direct that compartment soil maps should be consulted for the presence of highly erodible soils or soils with severe equipment limitations. Timber harvest permits can define harvesting equipment to limit site impacts. Typically, the focus is on results rather than equipment in order to maintain a non-discriminatory timber sale award system.
7.1.q. Plans for harvesting and other significant site-disturbing management activities required to carry out the management plan are prepared prior to implementation. Plans clearly describe the activity, the relationship to objectives, outcomes, any necessary environmental safeguards, health and safety measures, and include maps of adequate detail.	C	SFRMP timber sale packets examined during the audit cover all these details.
7.1.r. The management plan describes the stakeholder consultation process.	C	<p>The current 2003/2007 SFRMP includes a schedule of the public meetings and surveys that were conducted. As part of the 2014 SFRMP revision, a new Internet-based survey was launched in August 2013. Additional opportunities for public input through 2014 will include written comment and public meetings.</p> <p>Interviews with DNR staff indicate that the 2014 stakeholder input process is being designed to be efficient, leveraging new communications strategies and technology with less emphasis on “town hall” events that have declined in popularity.</p> <p>Specific “hot button” issues such as Oil & Gas leasing, recreational planning, deer management and HCVF designation have received extra stakeholder consultation emphasis. Since DCNR is a public agency, the state legislature also plays a significant role in constituent consultation.</p>
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		

<p>respond to changing environmental, social and economic circumstances.</p>		
<p>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.</p>	<p>C</p>	<p>Except for the concern expressed in Criterion 5.6 about the need to clarify when the Sustainable Harvest Allocation Model will be updated, DCNR has demonstrated a commitment to updating the SFRMP on approximately a five-year cycle. They are currently in an effort to completely update the plan by the end of 2014. Previous revisions were in 2003 and 2007.</p>
<p>C7.3. Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plans.</p>	<p>C</p>	
<p>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.</p>	<p>C</p>	<p>DCNR maintains detailed manuals (silviculture, roads, chemical use, forest health strategic plans, etc.) that address various functions within the SFRMP. Training is conducted on SFRMP components, including the compendium of supporting documents, as updates are rolled out. Training records are maintained in FIMS. Also, FY12 Annual Training Report, which summarizes number of attendees for each event.</p>
<p>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.</p>	<p>C</p>	
<p>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.</p>	<p>C</p>	<p>DCNR web sites make all the planning documents publicly available.</p>
<p>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</p>	<p>C</p>	<p>Through use of Internet technology, the SFRMP process including draft plans is quite transparent. Note, however, the concern under Criterion 4.4 regarding public participation for short-term planning processes, including harvest plans and operational plans.</p> <p>DCNR also has a number of advisory committees that help steer management activities:</p>

<p>compliance with this Standard.</p>		<ul style="list-style-type: none"> • Pennsylvania Biological Survey and Vascular Plant Technical Committee • Pennsylvania Rare Plant Committee • The Ecosystem Management Advisory Committee • Silviculture/Timber Advisory Committee • Recreation Advisory Committee • Pennsylvania Forest Stewardship Steering Committee • The Pennsylvania Urban and Community Forestry Council • Pine Creek Rail Trail Advisory Committee • Pennsylvania Appalachian Trail Committee • Conservation and Natural Resources Advisory Council (CNRAC) • PA Greenways Partnership Commission • Pennsylvania Recreational Trails Advisory Board • Snowmobile and ATV Advisory Committee
<p>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.</p> <p><i>Applicability Note: On small and medium-sized forests (see Glossary), an informal, qualitative assessment may be appropriate. Formal, quantitative monitoring is required on large forests and/or intensively managed forests.</i></p>		
<p>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.</p>	<p>C</p>	
<p>8.1.a. Consistent with the scale and intensity of management, the forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written monitoring protocol.</p>	<p>C</p>	<p>As listed in 7.1.n, DCNR has a comprehensive monitoring protocol. More intense activities such as shale gas extraction have led to focused monitoring efforts that are well funded through the O&G revenue account. The complete series of Ground Water Resource Reports is available online. Forest health and invasive species concerns are monitored continuously. Historically, deer population impacts have also received extra attention.</p>
<p>8.2. Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators: a) yield of all forest products harvested, b) growth rates, regeneration, and condition of the forest, c) composition and observed changes in the flora and fauna, d) environmental and social</p>	<p>C</p>	

<p>impacts of harvesting and other operations, and e) cost, productivity, and efficiency of forest management.</p>		
<p>8.2.a.1. For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.</p>	<p>C</p>	<p>DCNR’s Forest Planning and Inventory Section cooperates with the USFS to maintain forest inventory data and reports. In addition to Landscape Examinations using SILVAH software, a system of about 1,700 CFI plots are measured on State Forests on a five-year cycle for volume, stocking, growth and mortality information. Technologically advanced remote sensing including LiDAR coverage is also used. Data are maintained in FIMS.</p>
<p>8.2.a.2. Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information shall include date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative.</p>	<p>C</p>	<p>Catastrophic losses from wind, fire, pest outbreaks and other events are recorded and dealt with, and harvest allocations adjusted. The most significant impacts observed in field site audits are related to gypsy moth mortality. Salvage and regeneration efforts are prioritized by site quality.</p>
<p>8.2.b The forest owner or manager maintains records of harvested timber and NTFPs (volume and product and/or grade). Records must adequately ensure that the requirements under Criterion 5.6 are met.</p>	<p>C</p>	<p>The Bureau of Forestry maintains annual statistical reports that cover these requirements. Each forest district plan includes a history of past harvest activity. Broadly all projects are reviewed spatially in the FIMS system.</p> <p>Timbersales are inspected throughout the contract term and are followed up at intervals after sale completion by the foresters to monitor management goals. Any issues that need addressed are confronted and improvements implemented.</p>
<p>8.2.c. The forest owner or manager periodically obtains data needed to monitor presence on the FMU of:</p> <ol style="list-style-type: none"> 1) Rare, threatened and endangered species and/or their habitats; 2) Common and rare plant communities and/or habitat; 3) Location, presence and abundance of invasive species; 4) Condition of protected areas, set-asides and buffer zones; 5) High Conservation Value Forests (see Criterion 9.4). 	<p>C</p>	<p>The Pennsylvania Natural Heritage Program tracks RTE species, habitats and communities.</p> <p>Landscape exams are conducted to evaluate changes in stands over 15 year intervals. During these exams all ecological, geologic and cultural aspects are considered and documented.</p> <p>Location, presence and abundance of invasive species are currently tracked at both the district and central office levels. Districts keep track of locations and treat areas internally. A forester in each district is charged with monitoring insect and plant pests within the district. Populations are noted in landscape exams and also through the FME chemical tracking database. In some cases large populations are contracted out for control. In addition central office staff keeps tabs on populations of invasive species and a tracking database is being developed and will be incorporated into the centralized FIMS. For insect pests the division of forest pest management conducts surveys and maps threats statewide.</p> <p>Protected areas, set-asides and buffer zones are identified in the SFRMP land zoning system and are regularly updated.</p>

		Each HCVF type has a separate monitoring protocol as identified in the HCVF Plan .
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	<p>Monitoring plans and activities are carried out on a number of levels. Broadly all projects are reviewed spatially in the FIMS system. Certain activities require detailed monitoring efforts such as with silvicultural activities, herbicide projects, road or bridge contracts, gas activities etc are monitored by staff on a regular basis. Some special resource management plans incorporate formal monitoring to evaluate special resource values and results of management practices or natural succession of environmental factors. All site disturbing activities require completion of a State Forest Environmental Review.</p> <p>Timber sales are inspected throughout the contract term and are followed up at intervals after sale completion by the foresters to monitor management goals. Any issues that need addressed are confronted and improvements implemented.</p>
8.2.d.2. A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.	C	DCNR conducts a regular forest road and trail survey (with results in a GIS layer), studies ATV impacts, and monitors trucking impacts related to O&G development and timber harvests. DCNR also cooperates with PennDOT on evaluating the condition of roads and bridges.
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).	C	<p>The 2010 Statewide Forest Resource Assessment and Strategies thoroughly examined the issues noted in the indicator. Marketing and utilization studies are regularly conducted. Shale gas development studies monitor local economic impacts.</p> <p>A number of Advisory committees monitor different focus areas. These committees are made up of agency professionals, university professionals, industry, business and forest users. Examples include: Recreation Advisory Committee, Ecosystem Management Advisory Committee, and the Silviculture/Timber Advisory Committee. The BOF also participates in DCNR's Conservation and Natural Resources Advisory Committee, the Snowmobile ATV Advisory Committee, and the Pine Creek Rail Trail Advisory Committee.</p> <p>For Marcellus shale development, a new staff member focusing solely on social impacts of gas development has been added to the bureau's complement. DCNR uses a Recreation Opportunity Spectrum zoning for minimizing impacts to recreational experiences and is currently funding a large (multi-district and multi-year) recreation/visitor use monitoring survey. On the local level forest districts hold public meetings concerning local management concerns and practices and also conduct landowner workshops and maintain a presence at community activities to answer questions and collect comments.</p>
8.2.d.4. Stakeholder responses to management activities are	C	SFRMP plan appendices list feedback from stakeholders. Public input survey forms are available on the DCNR website.

monitored and recorded as necessary.		
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).	C	DCNR maintains a tribal contact list and regularly invites input. CRGIS is a map-based inventory of the historic and archaeological sites and surveys stored in the files of the Bureau for Historic Preservation (BHP). The Pennsylvania Historical and Museum Commission (PHMC) has been collecting information concerning archaeological sites and historic resources for the greater part of a century. Currently there are 22,813 archaeological sites and 129,503 historic properties in these files. Access to these paper records is free and open to the public by appointment at the BHP office in Harrisburg. CRGIS is a means of accessing some of these data without a trip to Harrisburg.
8.2.e. The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.	C	Costs, productivity and efficiency of forest management are monitored through the biennial budget process, BOF Statistical Reports, the SFRMP planning process and internal reviews. Costs and revenues are monitored utilizing the Commonwealth's financial system, SAP, at all levels from the Governor's Office to the district office. Fiscal year spending plans are developed utilizing formulas and funding requests. The Business Manager has overall responsibility for monitoring financial activities and does so through reports, meetings, and presentations on current and projected costs and revenues.
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	DCNR sells FSC timber on "lump sum" contracts, making the stump the forest gate. As a result, the risk of mixing is minimal. The first page of timber sale contracts are clearly marked with the FSC Claim (FSC 100%) and COC code. See SCS FSC Chain of Custody Indicators for Forest Management Enterprises, Version 5-0 in the main report for additional details.
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 OBS	The first page of timber sale contracts are clearly marked with the FSC Claim (FSC 100%) and COC code. See SCS FSC Chain of Custody Indicators for Forest Management Enterprises, Version 5-0 in the main report for additional details. OBS 2013.6: Currently, DCNR has authorization to use FSC trademarks from its former Certification Body. Since FSC license codes and COC codes will change with the re-issued certificate, updated requests should be submitted to SCS.

		DCNR should seek authorization from SCS in advance of implementing FSC trademark revisions and new usage of FSC trademarks in publications and web pages.
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	SFRMPs are revised on a ~5-yr cycle and so incorporate effectiveness review. Individual district forest plans compare accomplishments to projections.
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	<p>Changing conditions, especially in relation to shale gas development, invasive species, climate change, economic fluctuations and deer management, are among the drivers prompting DCNR to complete a full revision of the SFRMP in 2014.</p> <p>The Statewide Forest Assessment includes development of new strategies to achieve goals.</p> <p>DCNR’s Forest Inventory and Planning Section is charged with regular review of certification requirements and progress toward meeting them. These efforts have focused on issues identified by FSC third-party audits including non-conformances and observations.</p>
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.	C	
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.	C	As a state agency, DCNR makes full monitoring results readily available to the public. DCNR is committed to making its public records easily available to persons requesting them, and instructions for obtaining open records are posted on the Internet. As noted in the indicators for Criterion 8.2, monitoring information is widely available.

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).**

Examples of forest areas that *may have* high conservation value attributes include, but are not limited to:

Central Hardwoods:

- Old growth – (see Glossary) (a)
- Old forests/mixed age stands that include trees >160 years old (a)
- Municipal watersheds –headwaters, reservoirs (c)
- Rare, Threatened, and Endangered (RTE) ecosystems, as defined by GAP analysis, Natural Heritage Inventory, and/or the World Wildlife Fund's Forest Communities of Highest Conservation Concern, and/or Great Lakes Assessment (b)
- Intact forest blocks in an agriculturally dominated landscape (refugia) (a)
- Intact forests >1000 ac (valuable to interior forest species) (a)
- Protected caves (a, b, or d)
- Savannas (a, b, c, or d)
- Glades (a, b, or d)
- Barrens (a, b, or d)
- Prairie remnants (a, b, or d)

North Woods/Lake States:

- Old growth – (see Glossary) (a)
- Old forests/mixed age stands that include trees >120 years old (a)
- Blocks of contiguous forest, > 500 ac, which host RTEs (b)
- Oak savannas (b)
- Hemlock-dominated forests (b)
- Pine stands of natural origin (b)
- Contiguous blocks, >500 ac, of late successional species, that are managed to create old growth (a)
- Fens, particularly calcareous fens (c)
- Other non-forest communities, e.g., barrens, prairies, distinctive geological land forms, vernal pools (b or c)
- Other sites as defined by GAP analysis, Natural Heritage Inventory, and/or the World Wildlife Fund's Forest Communities of Highest Conservation Concern (b)

Note: In the Lake States-Central Hardwoods region, old growth (see Glossary) is both rare and invariably an HCVF.

In the Lake States-Central Hardwoods region, cutting timber is not permitted in old-growth stands or forests.

Note: Old forests (see Glossary) may or may not be designated HCVFs. They are managed to maintain or recruit: (1) the existing abundance of old trees and (2) the landscape- and stand-level structures of old-growth forests, consistent with the composition and structures produced by natural processes.

Old forests that either have or are developing old-growth attributes, but which have been previously harvested, may be designated HCVFs and may be harvested under special plans that account for the ecological attributes that make it an HCVF.

Forest management maintains a mix of sub-climax and climax old-forest conditions in the landscape.

<p>C9.1. Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.</p>	<p>C</p>	
<p>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.</p> <p>Given the relative rarity of old growth forests in the contiguous United States, these areas are normally designated as HCVF, and all old growth must be managed in conformance with Indicator 6.3.a.3 and requirements for legacy trees in Indicator 6.3.f.</p>	<p>C</p>	<p>Although earlier efforts had identified portions of state forests as HCVF, a 2011 process resulted in a detailed assessment. A 22-page document describes the analysis process. The result was the listing of more than 350 sites, totaling 177,000 acres. These sites represented 12 of the 15 criteria outlined by FSC for classifying high conservation values. For instance, 26 sites of old growth forest were listed for Criterion 3.1</p>
<p>9.1.b. In developing the assessment, the forest owner or manager consults with qualified specialists, independent experts, and local community members who may have knowledge of areas that meet the definition of HCVs.</p>	<p>C</p>	<p>The 2011 HCVF process involved the Department’s Ecosystem Management Advisory Committee (appointed experts and other members of the public), and formal consultation with the Western Pennsylvania Conservancy and The Nature Conservancy.</p>
<p>9.1.c. A summary of the assessment results and management strategies (see Criterion 9.3) is included in the management plan summary that is made available to the public.</p>	<p>C</p>	<p>A document dated February 2012 and entitled “DCNR Bureau of Forestry 2011 High Conservation Value Forest Analysis,” had been prepared as a useful summary of the process for selecting portions of state forests and designating them to meet one of the criteria for HCVF. Management for these areas can be inferred by the management designation of each area, e.g., wild plant sanctuary.</p>
<p>C9.2. The consultative portion of the certification process must place emphasis on the identified</p>	<p>C</p>	

<p>conservation attributes, and options for the maintenance thereof.</p>		
<p>9.2.a. The forest owner or manager holds consultations with stakeholders and experts to confirm that proposed HCVF locations and their attributes have been accurately identified, and that appropriate options for the maintenance of their HCV attributes have been adopted.</p>	<p>C</p>	<p>The 2011 HCVF process involved the Department’s Ecosystem Management Advisory Committee (appointed experts and other members of the public), and formal consultation with the Western Pennsylvania Conservancy and The Nature Conservancy.</p>
<p>9.2.b. On public forests, a transparent and accessible public review of proposed HCV attributes and HCVF areas and management is carried out. Information from stakeholder consultations and other public review is integrated into HCVF descriptions, delineations and management.</p>	<p>C</p>	<p>As described in 9.2.a, appropriate experts were consulted, including appointed members of an advisory committee to the Department. In addition, a draft analysis of HCVF areas was posted on the public website for a month, and a letter was sent to key stakeholders.</p>
<p>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.</p>	<p>C</p>	
<p>9.3.a. The management plan and relevant operational plans describe the measures necessary to ensure the maintenance and/or enhancement of all high conservation values present in all identified HCVF areas, including the precautions required to avoid risks or impacts to such values (see Principle 7). These measures are implemented.</p>	<p>C</p>	<p>Some of the areas identified as HCVF have specific management plans, e.g., Three Squares Hollow Wild Plant Sanctuary, and Linn Run, but most areas fall into a management classification.</p>
<p>9.3.b. All management activities in HCVFs must maintain or enhance the high conservation values and the extent of the HCVF.</p>	<p>C</p>	<p>It is clear from the process of nominating and selecting areas of HCVF that the management intent for these areas is in conformance with the intent of this indicator. Where special management plans exist for HCVF, the conservation intent is obvious.</p>
<p>9.3.c. If HCVF attributes cross ownership boundaries and where maintenance of the HCV attributes</p>	<p>C</p>	<p>All HCVF areas identified by DCNR are entirely within state forest lands.</p>

would be improved by coordinated management, then the forest owner or manager attempts to coordinate conservation efforts with adjacent landowners.		
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	In 2012, a two-page document was prepared for District offices to outline expectations for monitoring HCVF areas. Some of the monitoring is routine and ongoing, but other efforts are specifically directed at special areas for which individual management plans have been prepared and will continue to be developed by Ecological Services.
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	Auditors are not aware of relevant examples but are confident that the attributes of HCV will be protected and managed as needed.
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.		
C10.1 The management objectives of the plantation, including natural forest conservation and restoration objectives, shall be explicitly stated in the management plan, and clearly demonstrated in the implementation of the plan.	N/A	Tree planting and other forest management activities on PA DCNR lands do not fall within the FSC plantations definition.
APPENDICES		
APPENDIX C: REGIONAL LIMITS AND OTHER GUIDELINES ON OPENING SIZES This Appendix contains regional Indicators and guidance pertinent to maximum opening sizes and	C	

<p>other guidelines for determining size openings and retention. These Indicators are requirements based on FSC-US regional delineations</p> <p>Indicator 6.3.g.1</p>		
<p>APPALACHIA REGION</p>		
<p>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.</p> <p>Guidance: <i>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.</i></p>	<p>C</p>	<p>DCNR practices retention on all harvest sites. Silvicultural practices are consistent with the indicator’s guidance.</p>
<p>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.</p> <p>Applicability note: <i>Uneven age silvicultural techniques are used when they maintain or enhance the overall species richness and biologic diversity, regenerate-shade tolerant or intermediate-tolerant species, and/or provide small canopy</i></p>	<p>C</p>	<p>DCNR seldom uses uneven-aged silvicultural techniques other than in buffer strips, which are maintained for continuous canopy cover.</p>

<p><i>openings to regenerate shade-intolerant and intermediate species. Uneven-age techniques are generally used to develop forests with at least three age classes. Uneven age silviculture is employed to prevent high-grading and/or diameter limit cutting.</i></p>					
<p>APPENDIX E: STREAMSIDE MANAGEMENT ZONE (SMZ) REGIONAL REQUIREMENTS Indicator 6.5.e</p>					
<p>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.</p>					
<p>APPALACHIA REGION <i>The SMZ is designed to allow harvesting and provide flexibility for silvicultural management.</i></p>		C			
<p>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.</p>		C	Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007		
<p>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*</p>					
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 <i>non-high-quality waters</i> (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.	C		Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007		
6.5.e.1.c (APP only) Along perennial streams that are designated as <i>high-quality waters</i> (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.	C		Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007		
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 habitat. When such specific information is not available, the width of streamside management	C		Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007		

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.	C	Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007
6.5.e.1.f (APP only) The entire SMZ of intermittent streams is managed as an outer buffer zone.	C	Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007
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.	C	Met or exceeded in PA DCNR Aquatic Habitat Buffer Guidelines, Effective January 1, 2007

Appendix 6 – Tracking, Tracing and Identification of Certified Products

SCS FSC Chain of Custody Indicators for Forest Management Enterprises, Version 5-0

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	DCNR procedures designate the Silviculture Section Chief (Scott Miller) as the COC administrator.
1.2 The FME shall maintain complete records of all FSC-related COC activities, including sales and training, for at least 5 years.	C	Timber sales and training records are tracked in the Forest Information Management System (FIMS) centralized database.
1.3 The FME shall define its forest gate(s) (check all that apply): <i>The forest gate is defined as the point where the change in ownership of the certified-forest product occurs.</i>	C	<p>Stump</p> <p><input type="checkbox"/> <i>Stumpage sale or sales of standing timber; transfer of ownership of certified-forest product occurs upon harvest.</i></p> <p>On-site concentration yard</p> <p><input type="checkbox"/> <i>Transfer of ownership of certified-product occurs at concentration yard under control of FME.</i></p> <p>Off-site Mill / Log Yard</p> <p><input type="checkbox"/> <i>Transfer of ownership occurs when certified-product is unloaded at purchaser’s facility.</i></p> <p>Auction house / Brokerage</p> <p><input type="checkbox"/> <i>Transfer of ownership occurs at a government-run or private auction house / brokerage.</i></p> <p>Lump-sum sale / Per Unit / Pre-Paid</p> <p><input checked="" type="checkbox"/> Agreement <i>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.</i></p> <p>Log landing</p> <p><input type="checkbox"/> <i>Transfer of ownership of certified-product occurs at landing / yarding areas.</i></p> <p><input type="checkbox"/> Other (Please describe):</p>

<p>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.</p>	<p>C</p>	<p>DCNR timber sale procedures specify that FSC-certified and non-certified wood must be separated. Land clearing harvests related to well pads and ROWs and harvests set up for other state agencies are clearly labeling as “non FSC-certified” in the upper right-hand corner of the first page of the contract and no COC codes are provided.</p>
<p>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. <i>NOTE: This does not apply to log cutting or debarking units, small portable sawmills or on-site processing of chips / biomass originating from the FMU under evaluation.</i></p>	<p>C</p>	<p>DCNR timber is sold lump sum, and so ownership is transferred when the block bond is posted.</p>
<p>2. Product Control, Sales and Delivery</p>		
<p>2.1. Products from the certified forest area shall be identifiable as certified at the forest gate(s).</p>	<p>C</p>	<p>FSC-certified timber sales are clearly marked with a COC code and FSC claim on the top page of the timber sale contract. Subsequent invoices are considered part of the contract and are linked to the contract with the sale number.</p>
<p>2.2 The FME shall maintain records of quantities / volumes of FSC-certified product(s).</p>	<p>C</p>	<p>DCNR BOF publishes an annual Timber Harvest Statistical Report with the required data.</p>
<p>2.3. The FME shall ensure that all sales documents issued for outputs sold with FSC claims include the following information:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> i. the claim “FSC 100%” for products from FSC 100% product groups; ii. the claim “FSC Controlled Wood” for products from FSC 	<p>C</p>	<p>The required information is included in the timber sale contract. Since all sales are lump sum, there are no transport documents or haul tickets.</p>

<p>Controlled Wood product groups.</p> <p>h) If separate transport documents are issued, information sufficient to link the sales document and related transport documentation to each other.</p>		
<p>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.</p> <p>Note: 2.3 and 2.4 above are based on FSC-STD-40-004 V2-1 Clause 6.1.1 and 6.1.2</p>	<p>NA</p>	<p>No delivery documents; lump-sum sales.</p>
<p>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:</p> <ul style="list-style-type: none"> 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. <p><i>FSC-ADVISE-40-004-05</i></p>	<p>NA</p>	<p>Supplementary evidence is not necessary.</p>
<p>3. Labeling and Promotion</p>		<p><input type="checkbox"/> N/A</p>

3.1 Describe where / how the organization uses the SCS and FSC trademarks for promotion.	C	DCNR uses FSC trademarks on its web site, in printed educational material and in news releases.
3.2 The FME shall request authorization from SCS to use the FSC on-product labels and/or FSC trademarks for promotional use.	C	Currently, DCNR has authorization to use FSC trademarks from its old CB. Since FSC license codes and COC codes will change with the re-issued certificate, updated requests should be submitted to SCS. See OBS 2013.3 .
3.3 Records of SCS and/or FSC trademark use authorizations shall be made available upon request.	C	DCNR COC procedures address this requirement.
4. Outsourcing		<input checked="" type="checkbox"/> N/A
4.1 The FME shall provide the names and contact details of all outsourced service providers.		
4.2 The FME shall have a control system for the outsourced process which ensures that: <ul style="list-style-type: none"> 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	DCNR personnel with COC responsibilities are trained and aware of their roles based upon observed practices. The agency's COC manual addresses training. Since timber harvest forms are centrally administered, there is little opportunity for field staff to be non-conformant.

<p>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).</p>	<p>C</p>	<p>Timber harvest training (including COC) is tracked in a centralized state database. Form and handbook updates are communicated to staff through a Departmental Intranet and central server.</p>
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Appendix 7 – Peer Review and SCS Evaluation Team Response to Peer Review

No peer review was required.