

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

*Michigan Department of Natural Resources  
Michigan State Forests*

Michigan, USA

**SCS-FM/COC-00090N**

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CERTIFIED	EXPIRATION
Day Month Year	Day Month Year

DATE OF FIELD AUDIT
28 September – 2 October 2015
DATE OF LAST UPDATE
11/December/2015

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## Foreword

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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	Michigan Department of Natural Resources		
Contact person	David Price, Forest Certification Coordinator		
Address	DNR Forest Resources Division P.O. Box 30452 Lansing, MI 48909-7952	Telephone	517-284-5891
		Fax	517-373-2443
		e-mail	<a href="mailto:priced1@michigan.gov">priced1@michigan.gov</a>
		Website	<a href="http://www.michigan.gov/dnr/">http://www.michigan.gov/dnr/</a>

##### 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	<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)	NA	
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
<b>Total forest area in scope of certificate which is:</b> Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac		
privately managed	0	
state managed	3.8 million acres (excludes military lease lands, Luce County lease lands, GMO excised croplands, Wildlife Management Areas without FMD co-management)	
community managed	0	

Number of FMUs in scope that are:			
less than 100 ha in area	0	100 - 1000 ha in area	0
1000 - 10 000 ha in area	0	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 checked="" type="checkbox"/> ac
are less than 100 ha in area	0		
are between 100 ha and 1000 ha in area	0		
meet the eligibility criteria as <i>low intensity</i> SLIMF FMUs	0		
Division of FMUs into manageable units:			
<p>The State Forest is located throughout the Northern Lower Peninsula (LP) and across the Upper Peninsula (UP). The State Forest is organized into 15 management units, 8 in the LP and 7 in the UP:</p> <ul style="list-style-type: none"> <li>• Lower Peninsula: Cadillac, Gladwin, Roscommon, Grayling, Traverse City, Atlanta, Gaylord, and Pigeon River Country</li> <li>• Upper Peninsula: Sault Ste. Marie, Newberry, Shingleton, Escanaba, Gwinn, Crystal Falls, and Baraga</li> </ul>			

## 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)	Approximately 2.4 million acres
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	Approximately 600,000 acres
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	Approximately 1.9 million acres
Silvicultural system(s)	Area under type of management
Even-aged management	
Clearcut (clearcut size range – Average of 44 Acres)	Approximately 1.7 million acres
Shelterwood	Approximately 200,000 acres
Other:	Not quantified
Uneven-aged management	
Individual tree selection	Approximately 500,000 acres
Group selection	Not quantified
Other:	
<input type="checkbox"/> Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	
The sustainable rate of harvest (usually Annual Allowable Harvest or AAH where available) of commercial timber (m3 of round wood)	Approximately 856,000 cords
Non-timber Forest Products (NTFPs)	
Area of forest protected from commercial harvesting of timber and	None

managed primarily for the production of NTFPs or services	
Other areas managed for NTFPs or services	None
Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type	None
<b>Explanation of the assumptions and reference to the data source upon which AAH and NTFP harvest rates estimates are based:</b>	
IFMAP and GIS	
<b>Species in scope of joint FM/COC certificate: <i>Scientific/ Latin Name (Common/ Trade Name)</i></b>	
Black ash ( <i>Fraxinus nigra</i> ); green ash( <i>Fraxinus pennsylvanica</i> ); white ash ( <i>Fraxinus americana</i> ); bigtooth aspen ( <i>Populus grandidentata</i> ); Trembling aspen ( <i>Populus tremuloides</i> ); balm of Gilead ( <i>Populus balsamifera</i> ); balsam fir ( <i>Abies balsamea</i> ); basswood ( <i>Tilia Americana</i> ); paper birch ( <i>Betula papyrifera</i> ); yellow birch ( <i>Betula alleghaniensis</i> ); white cedar ( <i>Thuja occidentalis</i> ); black cherry ( <i>Prunus serotina</i> ); Eastern Hemlock ( <i>Thuja Canadensis</i> ); sugar maple ( <i>Acer saccharum</i> ); red maple ( <i>Acer rubrum</i> ); northern red oak ( <i>Quercus rubra</i> ); northern pin oak ( <i>Quercus ellipsoidalis</i> ); white oak ( <i>Quercus alba</i> ); jack pine ( <i>Pinus banksiana</i> ); red pine ( <i>Pinus resinosa</i> ); white pine ( <i>Pinus strobes</i> ); black spruce ( <i>Picea ,mariana</i> ); white spruce ( <i>Picea glauca</i> ); tamarack ( <i>Larix laricina</i> );	

### 1.2.2 FSC Product Classification

Timber products			
	Product Level 1	Product Level 2	Species
<input checked="" type="checkbox"/>	<b>W1 Rough Wood</b>	W1.1 Roundwood (logs)	All
<input checked="" type="checkbox"/>		W1.2 Fuel Wood	All
<input checked="" type="checkbox"/>		W1.3 Twigs	All
<input type="checkbox"/>	<b>W2 Wood charcoal</b>		
<input checked="" type="checkbox"/>	<b>W3 Wood in chips or particles</b>	W3.1 Wood chips	All
<input type="checkbox"/>	<b>Other*</b>	Please List:	
Note: If your operation produces processed wood products such as wood pellets, planks, beams, poles etc. please discuss with SCS staff as you may need a separate CoC certificate.			

Non-Timber Forest Products			
	Product Level 1	Product Level 2	Product Level 3 and Species
<input checked="" type="checkbox"/>	<b>N1 Bark</b>		All

**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	Approximately 184,000 acres comprised of: Dedicated and Proposed Natural Areas, National Natural Landmarks, TNC Natural Area Registry, Critical Dunes, Natural Rivers, Ecological Reference Areas, and Type 1 & 2 Old Growth. Note: These areas are not mutually exclusive of the HCV Types as described below.
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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).	Designated Critical Habitat Kirtland’s Warbler and Piping Plover habitat.	154,161 Acres <sup>1</sup>
<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.	Common Ecological Reference Areas, Dedicated State Natural Areas (SNAs), State Natural Rivers (SNR), and Dedicated Habitat Areas for Interior Core Forest Species	89,792 Acres <sup>2</sup>
<input checked="" type="checkbox"/>	HCV3	Forests or areas that are in or contain rare, threatened or endangered ecosystems.	Critical Dunes, Coastal Environmental Areas, and Rare/Sensitive/Vulnerable Ecological Reference Areas.	106,255 Acres
<input type="checkbox"/>	HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	None located upon the Michigan State Forest system.	0 Acres
<input type="checkbox"/>	HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).	None located upon the Michigan State Forest system.	0 Acres
<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).	The Michigan DNR currently utilizes other mechanisms to identify, conserve, and manage areas critical to local communities’ traditional cultural identity such as THPO, SHPO, Compartment Review, land use permits, and designation as	0 Acres

			"Special Conservation Areas".	
<b>Total Area of forest classified as 'High Conservation Value Forest/ Area'</b>				<b>316,453 Acres<sup>3</sup></b>

<sup>1</sup> The approximately 146,000 of dedicated Kirtland’s warbler habitat are intensively managed jack pine stands.

<sup>2</sup> Approximately 10,376 acres of dedicated Interior Core Species habitat is available for timber production.

<sup>3</sup> The reported HCV 1-3 categories are not cumulative. The reported 316,453 acre total reflects elimination of 23,755 acres of overlap among the HCV 1-3 categories.

### 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 type="checkbox"/> Applicant owns and/or manages other FMUs not under evaluation.		
<input checked="" type="checkbox"/> Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification.		
<b>Explanation for exclusion of FMUs and/or excision:</b>	Land is excluded from the DNR’s FSC Certificate primarily because the DNR does not exercise full control over management activities, or because the purposes for which the lands are held are not necessarily benefited by forest certification (e.g. the lands are not jointly co-managed by the DNR Forest Management and Wildlife Divisions and are devoted primarily to Wildlife or Fisheries management or State Parks).	
<b>Control measures to prevent mixing of certified and non-certified product (C8.3):</b>	Any timber harvests in non-certified forests are not sold or advertised as certified. Fisheries Research/ Hatcheries and agricultural areas are outside of the scope of FSC certification as no forest products or services are directly managed.	
<b>Description of FMUs excluded from or forested area excised from the scope of certification:</b>		
<b>Name of FMU or Stand</b>	<b>Location (city, state, country)</b>	<b>Size (<input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac)</b>
Long Term Military Lease Lands	Otsego, Crawford, and Kalkaska Counties in the Northern Lower Peninsula of Michigan	101,567 acres
Lands Leased to Luce County	Luce County in the Upper Peninsula of Michigan	2,786 acres
Michigan State Park System	Throughout Michigan	286,000 acres
Wildlife Management Units administered by DNR Wildlife Division	Primarily located in the Southern Lower Peninsula of Michigan	350,000 acres
Fisheries Research Areas/Hatcheries	Southern and Northern Lower Peninsula of Michigan	4,145 acres
Lands available for planting to GMO corn/soybeans	Northern Lower Peninsula of Michigan	424 acres

### 1.4 Social Information

<b>Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):</b>		
502 male workers	147 female workers	
<b>Number of accidents in forest work since last audit:</b>	<b>Serious: 14</b>	<b>Fatal: 0</b>

### 1.5 Pesticide and Other Chemical Use

FME does not use pesticides.

Commercial name of pesticide/herbicide/	Active ingredient(s)	Quantity applied (lbs., quarts or gallons)	Acres Treated	Reason for use	Contact person & Division	FTP number
Rodeo	Glyphosate	29.5	79	Red pine release	Don Kuhr FRD	41-1288
Rodeo	Glyphosate	18.5	49	Red pine release	Don Kuhr FRD	41-1441
Garlon 3A	Tryclopyr	18.4	49	Red pine release	Don Kuhr FRD	41-1441
Rodeo	Glyphosate	36.4	49	Site Prep	Don Kuhr FRD	41-1513
Rodeo	Glyphosate	22	29	Site prep	Don Kuhr FRD	41-1513
Rodeo	Glyphosate	9.1	24	Red pine release	Don Kuhr FRD	41-1513
Rodeo	Glyphosate	21.6	58	Red pine release	Don Kuhr FRD	44-543
Rodeo	Glyphosate	14.6	39	Red pine release	Don Kuhr FRD	44-548
Rodeo	Glyphosate	6.75	18	Red pine release	Don Kuhr FRD	44-564
Rodeo	Glyphosate	14.9	40	Red pine release	Don Kuhr FRD	44-567
Rodeo	Glyphosate	9.75	26	Red pine release	Don Kuhr FRD	44-575
Rodeo	Glyphosate	8.25	11	Site prep	Don Kuhr FRD	44-875
Rodeo	Glyphosate	25.5	68	Red pine release	Don Kuhr FRD	44-582
Rodeo	Glyphosate	11.19	30	Red pine release	Don Kuhr FRD	44-582
Rodeo	Glyphosate	14.9	40	Red pine release	Don Kuhr FRD	44-583
Rodeo	Glyphosate	10.6	28	Red pine release	Don Kuhr FRD	44-583
Rodeo	Glyphosate	22.9	31	Site prep	Don Kuhr FRD	44-595
Rodeo	Glyphosate	24.2	32	Site prep	Don Kuhr FRD	44-596
Rodeo	Glyphosate	22	29	Site prep	Don Kuhr FRD	44-596
Rodeo	Glyphosate	47.3	63	Site Prep	Dan McNamee FRD	12-404
Rodeo	Glyphosate	16.5	22	Site Prep	Dan McNamee FRD	12-411
Garlon 3A	Tryclopyr	134.9	134.9	Powerline ROW	Darrell Welsh PRD	Nordic
Garlon 3A	Tryclopyr	120	120	Powerline ROW	Darrell Welsh PRD	Winona 138
Garlon 3A	Tryclopyr	16.4	16.4	Powerline ROW	Darrell Welsh PRD	M-38 Line
Garlon 3A	Tryclopyr	77	77	Powerline ROW	Darrell Welsh PRD	ASPG 11
Garlon 3A	Tryclopyr	7.9	7.9	Powerline ROW	Darrell Welsh PRD	39571 Chand #2

Garlon 3A	Tryclopyr	24.8	24.8	Powerline ROW	Darrell Welsh PRD	39561 (WE)
Escort	Methsulfuron methyl	269.8 oz	134.9	Powerline ROW	Darrell Welsh PRD	Nordic
Escort	Methsulfuron methyl	240 oz	120	Powerline ROW	Darrell Welsh PRD	Winona 138
Escort	Methsulfuron methyl	32.7 oz	16.4	Powerline ROW	Darrell Welsh PRD	M-38 Line
Escort	Methsulfuron methyl	154.0 oz	77	Powerline ROW	Darrell Welsh PRD	ASPG 11
Escort	Methsulfuron methyl	15.8 oz	7.9	Powerline ROW	Darrell Welsh PRD	39571 Chand #2
Escort	Methsulfuron methyl	49.6 oz	24.8	Powerline ROW	Darrell Welsh PRD	39561 (WE)
AquaNeat	glyphosate	19.9	26.5	Non-native phragmites	Kristie Sitar- WLD	W42-852
AquaNeat	glyphosate	0.2	.25	Non-native phragmites	Kristie Sitar- WLD	W42-851
AquaNeat	glyphosate	0.02	.025	Non-native phragmites	Kristie Sitar- WLD	W42-839
AquaNeat	glyphosate	21.08	28.6	Non-native phragmites	Kristie Sitar- WLD	W44-598
AquaNeat	glyphosate	36.5	48.75	Non-native phragmites	Kristie Sitar- WLD	W42-836
Rodeo	Glyphosate	5.32 oz	0.1	Non-native phragmites	David Jentoft	W45-192
Garlon 3A	Triclopyr	63.9 oz	37.1	Garlic Mustard	Matt Edison	44-600
Rodeo	Glyphosate	44	115	Red pine release	Scott Throop	62-783
Element 3A	Triclopyr	42	115	Red pine release	Scott Throop	62-783
Rodeo	Glyphosate	14.35	28.7	Red pine release	Scott Throop	63-770
Element 3A	Glyphosate	14.3	28.7	Red pine release	Scott Throop	63-770
Rodeo	Glyphosate	13.5	9	Release RP 8/21/2014	Tim Greco FRD	C52-319
Rodeo	Glyphosate	79.5	53	Release RP 9/2/2014	Tim Greco FRD	C52-322 B
Rodeo	Glyphosate	39	26	Release RP 9/2/2014	Tim Greco FRD	C52-350
Rodeo	Glyphosate	168	84	Release RP 9/2/2014	Tim Greco FRD	C52-353
Rodeo	Glyphosate	7	2	Weather station opening maint. 8/20/2014	Tim Greco FRD	C52-373
Rodeo	Glyphosate	147	98	Release RP 9/3/2014	Tim Greco FRD	C54-873

Rodeo	Glyphosate	73.5	21	Site Prep RP 9/3/2014	Tim Greco FRD	C54-902 N
Rodeo	Glyphosate	185.5	53	Site Prep RP 9/3/2014	Tim Greco FRD	C54-902 S
Rodeo	Glyphosate	42	28	Release RP 8/21/2014	Tim Greco FRD	C54-912 E
Rodeo	Glyphosate	86	43	Release RP 9/3/2014	Tim Greco FRD	C54-925
Rodeo	Glyphosate	30	20	Release RP 8/20/2014	Tim Greco FRD	C54-942
Rodeo	Glyphosate	37.5	25	Release RP 9/3/2014	Tim Greco FRD	C54-969
Rodeo	Glyphosate	164.5	47	Site Prep RP 9/3/2014	Tim Greco FRD	C72-647
Rodeo	Glyphosate	64.8	91	Powerline ROW, foliar	Greg Gatsey	Wolveri ne
Arsenal	Imazypyr	1.5	91	Powerline ROW, foliar	Greg Gatsey	Wolveri ne
Garlon 4	Tryclopypyr	34.7	322	Powerline ROW, Basal	Greg Gatsey	Wolveri ne
Arsenal	Imazypyr	1.7	322	Powerline ROW, Basal	Greg Gatsey	Wolveri ne
Arsenal	Imazypyr	17	99	Powerline ROW	Greg Gatsey	T.B. Tree Serv.
Milestone	aminopyrali d	218 oz.	99	Powerline ROW	Greg Gatsey	T.B. Tree Serv.
Escort XP	Metsulfuron methyl	44 oz.	99	Powerline ROW	Greg Gatsey	T.B. Tree Serv.
Garlon 3A	Tryclopypyr	52	52	Powerline ROW	Greg Gatsey	Owen Tree Serv
Arsenal AC	Imazypyr	1.97	52	Powerline ROW	Greg Gatsey	Owen Tree Serv
Arsenal	Glyphosate	21.25	85	Trail maintenance	Don Klingler	52-312
Quimag	Copper Sulfate	98	18	spring fingerling walleye harvest	Bob Kerry / Olen Gannon	I-75 Pond
Quimag	Copper Sulfate	100	18	spring fingerling walleye harvest	Bob Kerry / Eric Askam	I-75 Pond
Quimag	Copper Sulfate	50	6.5	spring fingerling walleye harvest	Emmett Sweeney	James farm
Prenfish Toxicant	Rotenone	30	18	walleye pond preparation	Olen Gannon	I-75 Pond

Prenfish Toxicant	Rotenone	7	20	walleye pond preparation	Jacob McWethy, Mark Mylchreest	Warren Pond
Prenfish Toxicant	Rotenone	1	3	walleye pond preparation	Jacob McWethy, Mark Mylchreest	Grasshopper Pond

## 1.6 Standards Used

### 1.6.1 Applicable FSC-Accredited Standards

Title	Version	Date of Finalization
FSC-US Forest Management Standard	1.0	July 8, 2010
All standards employed are available on the websites of FSC International ( <a href="http://www.fsc.org">www.fsc.org</a> ), the FSC-US ( <a href="http://www.fscus.org">www.fscus.org</a> ) or the SCS Standards page ( <a href="http://www.scsglobalservices.com/certification-standards-and-program-documents">www.scsglobalservices.com/certification-standards-and-program-documents</a> ). Standards are also available, upon request, from SCS Global Services ( <a href="http://www.SCSglobalServices.com">www.SCSglobalServices.com</a> ).		

### 1.6.2 SCS Interim FSC Standards

Title	Version	Date of Finalization
SCS FSC Chain of Custody Indicators for Forest Management Enterprises	5.1	December 3, 2012
This SCS Interim Standard was developed by modifying SCS' Generic Interim Standard to reflect forest management in the region and by incorporating relevant components of the Draft Regional / National Standard and comments from stakeholders. More than one month prior to the start of the field evaluation, the SCS Draft Interim Standard for the country / region was sent out for comment to stakeholders identified by FSC International, SCS, the forest managers under evaluation, and the National Initiative. A copy of the standard is available at <a href="http://www.scsglobalservices.com/certification-standards-and-program-documents">www.scsglobalservices.com/certification-standards-and-program-documents</a> or upon request from SCS Global Services ( <a href="http://www.SCSglobalServices.com">www.SCSglobalServices.com</a> ).		

## 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 <sup>2</sup> )	0.09290304
Acre (ac)	Hectare (ha)	0.4047
Volume Conversion Factors		
To convert from	To	multiply by
Cubic foot (cu ft)	Cubic meter (m <sup>3</sup> )	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

<b>Pertinent Regulations at the National Level</b>	<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>
<b>Pertinent Regulations at the State / Local Level</b>	<p>Michigan Freedom of Information Act of 1976,                  Natural Resources and Environmental Protection Act, 1994 PA 451 (NREPA), as amended, is the primary statute pertaining to State Forest management. Examples of relevant sections include:                  Part 305, Natural Rivers                  Part 351, Wilderness and Natural Areas                  Part 355, Biological Diversity Conservation                  Part 365, Endangered Species Protection                  Part 401, Wildlife Conservation                  Part 405, Wildlife Restoration, Management, and Research Projects                  Part 515, Prevention and Suppression of Forest Fires                  Part 525, Sustainable Forestry on State Forestlands                  Part 625, Mineral Wells                  Part 811, Off-Road Recreation Vehicles                  Part 821, Snowmobiles                  Part 831, State Forest Recreation                  MIOSHA STD-1135, Dept. of Labor, General Industry Standards, Part 51, Logging</p>

#### Regulatory Context Description

As described in the 2008 State [Forest Management Plan](#) and amendments, the State of Michigan’s Natural Resources and Environmental Protection Act (NREPA; 1994) provides the regulatory framework within which the Michigan DNR, Forest Resources Division must operate. For example, NREPA includes parts that address Federal laws, such as endangered species protections and measures to conserve biodiversity.

Michigan DNR is also subject to a number of Federal and State regulations that it normally addresses in management planning documents, institutional capacity (including other departments of State government), and implementation of planned management activities. For example, non-discrimination policies and practices are normally enforced through the Michigan Department of Civil Rights and the DNR’s Human Resources Division, and occupation health & safety oversight is enforced through the Michigan Department of Labor.

### 2.1.2 Environmental Context

<b>Environmental safeguards:</b>
<p>Assessments are guided by a Procedure Checklist, State Forest Land Resource Assessment Activities: The Michigan Forest Inventory System (MiFi) is based on forest community types and successional stages. Natural disturbance regimes are clearly reflected in management in all state forests visited during the audit, where natural and anthropogenic fire has been an important driver of landscape conditions throughout history. Considerations of natural disturbance patterns also are key elements of Management Area planning and RSFMPs. RTE elements, habitats or other species of concern, water resources, and soils are all part of the FME’s compartment review process and are mapped and discussed in pre-harvest compartment reviews, which involve personnel from various disciplines (e.g., wildlife, fisheries, and forestry). A review of historical conditions is included in the State Forest Management Plan, and more explicit information on historic conditions is addressed in regional state forest management plans.</p> <p>FME’s BMP manuals cover all requirements and are found here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-31154_31261---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-31154_31261---,00.html</a>.</p>
<b>Management strategy for the identification and protection of rare, threatened and endangered (RTE) species and their habitats:</b>
<p>Measures taken to protect any RTE species, habitats and/or plant communities is evaluated on a case by case basis during the compartment inventory process and rare species review guidelines. Data bases for RTE species are routinely checked for ROW maintenance requests, use permits, event permits, burn plans, etc., and special management requirements are provided when known species are identified for an area.</p> <p>FME’s recovery efforts observed during the 2015 audit include large, landscape-level Jack pine (<i>Pinus banksiana</i>) zones managed for Kirtland’s Warbler habitat. Large snags and declining trees are maintained for raptors and other species that depend on structure or woody debris during parts of their lifecycles, as observed on other sites visited in 2015. Recently, FME is actively participating with other stakeholders in the preparation and implementation of measures to protect the eastern massasuga rattlesnake and the northern long-eared bat, populations of which have been on decline due to invasive</p>

fungi.
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### 2.1.3 Socioeconomic Context

A socioeconomic assessment conducted in 2006 (Tessa Systems, LLC) showed that population growth in the FME's service areas located in the Upper Peninsula has either flattened or decreased, and increased in the Northern Lower Peninsula. While the vast majority of people identify as white or Caucasian, according to the same assessment, important ethnic/ racial minority groups in the service area mostly include indigenous people, many of whom have treaty rights. While not by large amounts, it is notable that the number of people who identify as Asian/ Pacific Islander, African American or as multi-racial has increased within the service area. These demographic factors may yield varying responses to the public's demands for forest resource management, especially where development pressure is high near state forests or the public lacks understanding of forest resource management practices.

During the past two years, FME has been working on updating socioeconomic information related to the management of the state forest system. Key analyses completed include studies of the economic impacts of recreation, OGM development (oil, gas, and mineral), leases, and timber, as well as direct and indirect impacts of forest management activities on local jobs.

According to the FME's state-wide forest management plan (FMP; 2008 as amended in 2014):

*Michigan's forests are a significant component of the social, economic and environmental well-being of its citizens. The economic contribution of these forests include employment opportunities, wealth creation and the production of commodity and noncommodity products and values for the benefit of both the rural and urban population of the state. Wood products and forest-based recreation and tourism are two primary elements of the overall forest-based economy, and both elements are beneficial for the development and maintenance of strong rural economies. During 2005, these two combined sectors are estimated to provide 150,000 jobs and contribute over \$10 billion to the state economy.*

*The economies of many northern Michigan counties are particularly dependent on earnings from wildland-based industries, including timber, mining, recreation and wildlife (Table 3.23), especially in the Upper Peninsula where there is a rich history of such industries that have been interwoven with the social fabric of the region. Ontonagon, Keweenaw, Delta and Gogebic counties in the in the Western Upper Peninsula Ecoregion approach or exceed one-quarter of total earnings from these industries. In the Eastern Upper Peninsula Ecoregion, Alger, Schoolcraft and Mackinac counties approach or exceed one-quarter of total earnings. In aggregate, the Northern Lower Peninsula is not as dependent upon wildland-based industries, but on an individual county basis, earnings from these industries in Montmorency, Presque Isle, Kalkaska and Crawford Counties exceed one-quarter of total earnings. Earnings are but one measure of the values associated with our wildlands. Our forests also generate a wide array of amenity values for people who live in or visit the northern portion of the state.*

*State forestlands provide for a wide variety of human uses, including production of timber and fiber for the forest products industry, oil, gas and mineral production, hunting and fishing opportunities,*

*recreation and tourism, and public education and research. Sustainable forest management is greatly influenced by the demands of each of these uses. However, the ability of the DNR to manage the state forest and provide for these and other uses is highly dependent upon revenue generated through timber sales as there is very little general fund support of these programs and others such as inventory, and wildfire and forest health protection.*

**2.1.4 Land use, Ownership, and Land Tenure**

FME’s forest management plan (FMP) includes a description of its ownership boundaries (see sections 1.5, 4.1.5, and Appendix E). The legal foundation for ownership and use rights is included in Part 525, Sustainable Forestry on State Forestlands, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Section 52503 of the statute requires comprehensive management planning of state-managed lands. Regional FMPs are prepared for the three main regions included in the FSC certificate and include descriptions of ownership and use rights held by FME and third parties in appendices.

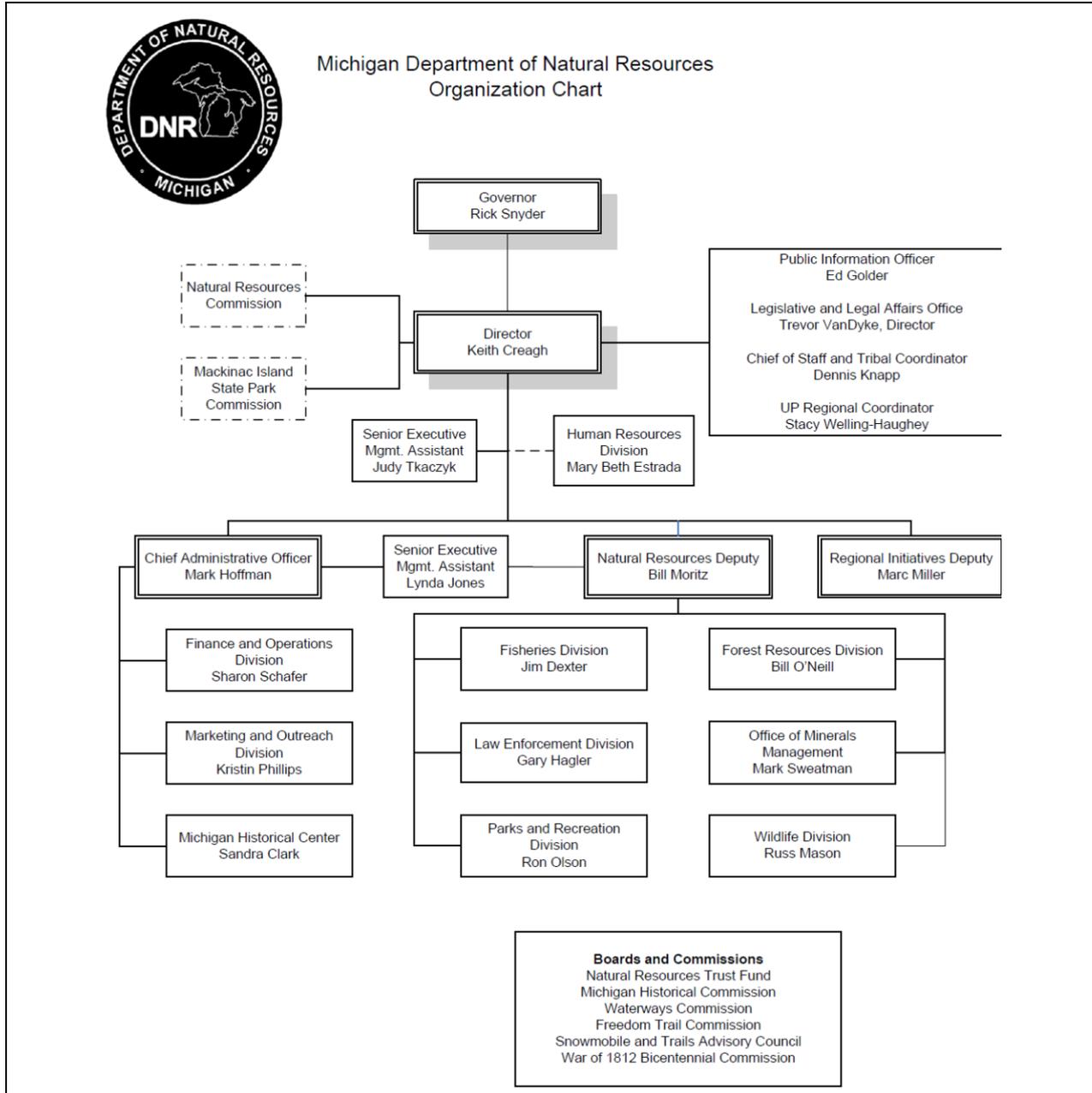
FME demonstrated GIS shape files of state ownership and leases mapped at quarter-quarter section level, based on parcel data in the Land Ownership Transaction System (LOTS). Information includes type of ownership (mineral rights, surface rights, and fee) and acreage for each type, by quarter-quarter section. Associated attribute table includes: number of parcels, type of ownership, and acreage of ownership for each quarter-quarter section. For parcel-based information, other data sources are used to confirm ownership at higher resolutions. Regional FMPs are prepared for the three main regions included in the FSC certificate and include descriptions of ownership and use rights held by FME and third parties in appendices.

Treaty rights held by indigenous people are addressed in management planning and guided by a consent decree prepared in 2007 to ensure consistent and efficient implementation of treaty obligations while meeting resource protection and management requirements.

**2.2 Forest Management Plan**

<b>Management Objectives:</b>
<p>The state-wide FMP (2008, as amended in 2014) contains specific objectives for forestry, recreation, wildlife and other topics. However, all objectives are guided by the FME’s desired future conditions as stated in the FMP:</p> <p><i>The desired future conditions of DNR-managed forestlands are predicated upon a sustainable, ecosystem-based management philosophy. When achieved, the desired future conditions will enable all of the following (in no explicit order of priority):</i></p> <ol style="list-style-type: none"> <li><i>1. Sustain fundamental ecological processes and functions that, in turn, support representative, diverse, and productive biological assemblages.</i></li> <li><i>2. Provide for a variety of ecosystem services that help sustain human civilization.</i></li> <li><i>3. Provide for a variety of sustainable human values that are derived from ecosystems; including economic, recreational, and intrinsic values and a wide array of resource outputs and forest-based products.</i></li> </ol>

<p><b>Forest Composition and Rationale for Species Selection:</b></p> <p>Cover types found throughout the state are described in Appendix F of the state-wide FMP and include: Aspen, balsam poplar swamp, black spruce swamp, bog, marsh, cedar swamp, grassland, hemlock, jack pine, lowland hardwoods, lowland brush, mixed swamp conifers, northern hardwoods, oak, paper birch, red pine, sand dune, spruce-fir, tamarack swamp, white pine, and other types common to the Lake States and Provinces of the North America. Harvestable species and/or cover types are based on access and potential uses for a species or species groups. Local industry relies on the state forest system for supplies of pulpwood, fuelwood, lumber, veneer, and other grades of material.</p>
<p><b>General Description of Land Management System(s):</b></p> <p>Depending on the cover type, normally a combination of even- and uneven-aged management systems is used to grow and harvest timber. Alternative forms of vegetation management (e.g., mowing, prescribed burning, herbicide) may be used when a site’s management includes non-timber related goals such as RTE species recovery, deer yards, invasive species control, etc.</p>
<p><b>Harvest Methods and Equipment used:</b></p> <p>Manual or mechanical felling/ processing are used depending on site conditions and desired end-use of harvested materials. Typically sites under single-tree selection undergo hand-felling with chainsaws and extraction with skidders or forwarders. In other situations, feller-bunchers, harvesters, processors, and other fully mechanized methods of harvesting are used.</p>
<p><b>Explanation of the management structures:</b></p> <p>The Michigan DNR consists of six divisions that play a role in maintaining its forest management certifications. While primarily the forest and wildlife divisions ensure compliance for forest certification requirements related to productive and protected forest areas, the fisheries division plays an important role in managing the interface between terrestrial and aquatic ecosystems. Other divisions, such as law enforcement and minerals management, coordinate with collaborate with other DNR divisions to utilize and/or protect natural resources under the scope of the forest management certifications.</p>



### 2.3 Monitoring System

**Growth and Yield of all forest products harvested:**

FME’s forest geospatial and inventory data as managed through its MiFI and VMS modules and annual compartment review field evaluations, FIA plot surveys, regeneration surveys, and forest health surveys is used to measure growth. FME relies on pre-harvest cruising data to measure yield.

**Forest dynamics and changes in composition of flora and fauna:**

The same inventory system mentioned above is used to measure a number of changes in forest dynamics. FME’s Wildlife Division monitors some wildlife populations by conducting or cooperating with wildlife surveys. The division annually surveys for: bald eagles, osprey, woodcock, waterfowl, Kirtland’s warbler, sharp-tailed grouse, and frogs & toads. Biennial surveys were conducted in 2014 for black bear

<p>and elk. A biennial survey is being conducted in 2015 for wolves and moose. An annual bear bait survey is geographically restricted to Drummond Island. The Division uses annual registration of harvested animals to monitor for population changes in deer, elk, bear, otter, fisher, and marten. The Division also cooperates in the banding of woodcock, ducks, and geese, which provides another means of monitoring survival rates and population trends. Although these surveys generally have statewide or regional scopes, they all include significant amounts of state forest land.</p>
<p><b>Environmental Impacts:</b></p> <p>FME’s prescriptions are reviewed in the field at least biweekly during operations, according to interviews with staff and harvest inspection records reviewed. Regeneration surveys are conducted as a part of monitoring natural and assisted regeneration 5-10 years post-harvest as scheduled in compartment calendars, as confirmed in interviews with state foresters and examination of harvest prescriptions for all three districts visited.</p> <p>Resource Damage Reports (RDR) are logged and tracked in the RDR database. Each district presented examples of RDR reports. FME is taking on a state-wide project to review stream-crossings for prioritizing upgrades, which may include replacing culverts with bridges or use of alternatively designed culverts.</p>
<p><b>Social Impacts:</b></p> <p>FME demonstrated evidence of socioeconomic monitoring in its fiscal year accomplishment reports, economic working group information presented to audit team on FTP site, participation in the 2013 forest products summit, and other annual reports prepared by other divisions (e.g., 2014 wildlife division annual report).</p>
<p><b>Costs, Productivity, and Efficiency:</b></p> <p>Forest Resources Division has published an Accomplishments Report for FY 2014 that addresses productivity and efficiency of management areas under FME’s jurisdiction.</p> <p>According to an interview with the sections manager, FME monitors costs and revenue using an accounting system. This information is presented to forest managers during monthly meetings so that they can monitor costs and projected revenues. Spending requests are subject to approval and tracked via the sections manager to ensure that FME remains within its budgetary constraints. If a staff member fails to report spending, he or she is subject to a purchasing violation.</p>

### 3. Certification Evaluation Process

#### 3.1 Evaluation Schedule and Team

##### 3.1.1 Evaluation Itinerary and Activities

Atlanta FMU Recertification Audit 9/28/15 - Tour 1			
Site #	Name	Feature of interest	Audit team notes
	Auditors arrive @ Atlanta FO	Opening Meeting and FMU & District Briefs	
4	Lake Sixteen	Troll Knoll Mix Tsale and Lake Sixteen ERA	Lake Sixteen ERA is an intermittent wetland that includes > 45 vascular plant species and is ringed by a low shrub zone dominated by leatherleaf ( <i>Chamaedaphne calyculata</i> ) black chokeberry

			<p>(<i>Aronia prunifolia</i>) and meadowsweet (<i>Spirea alba</i>). State listed species have been identified within the wet meadow and this system is an identified HCV area. ORV issues that threaten the status of this system have been identified and corrected. (Troll Knoll) Prescribed clear cut in &gt;80-year old oak stand with retention of Oak and pine. Observed retained pocket of legacy WP and RP (28-30" and ~140 year old individuals with dens and a stick nest. Observed GIS map layer of this permanent polygon of retention. Prescription includes buffer around historic State Forest HQ building foundation and a retention pocket that buffers the nearly adjacent Lake 16 ERA.</p>
2	SeaBass Aspen	Aspen Timbersale, has been cut and Recreation impacts	<p>Summer 2016 completed clear cut with retention of RP, RO and WP in groups. Irregular stand edges implemented as a wildlife habitat and aesthetics consideration. Buffer strip maintained on hiking trail that runs through the timber sale. One section of the stand has intentionally not yet been harvested as a recreational consideration and will be harvested at a later date. Snags, dens and LWD observed.</p>
3	C176 RPP Again	Red Pine Timbersale, Regen Concerns and Rec Impacts	<p>Completed 2008 shelterwood in 81-year old red pine plantation. RP regeneration lacking. Current prescription includes a clear cut with RP and aspen retention in pockets near recreational trail and followed by herbicide treatment and planting of red pine.</p>
1	Feral Cat Oak	Oak Timbersale	<p>LT marked 39-acre shelterwood in an 86-year old oak stand. Retains WP, RP, HK and selected oaks in small groups. Aesthetic considerations associated with nearby subdivision. Aspen within stand will be removed to stimulate sprouts for wildlife habitat. Project not yet sold.</p>
6	Pumpkin Spice Pine	Red Pine Sale, has been cut	<p>(ST-28) 2014 completed shelterwood in a 60-year old red pine plantation with RO retention. Some RP and abundant RO regeneration observed. A regeneration survey will follow in 2 years to confirm status of regeneration. Snags observed.</p>
7	C168 Mixed Pine	Red Pine Timbersale, has been cut.	<p>This 2014 completed clearcut is regenerating to aspen and represents an excellent example of early successional habitat creation. Observed demonstration of field use of GIS system to identify mapped retention pockets.</p>

5	Krouse Rd Lowland Stand	Lowland Conifer Type being prepped for Sale	Prescribed clear cut with pockets of retention in mixed lowland forest (with cedar). Retention groups centered on low/wet spots and hemlock/cedar pockets. Prescription part of the FME's Lowland Harvesting Initiative. Observed regen monitoring database (data not in association with this site).
<b>Atlanta FMU Recertification Audit 9/28/15 - Tour 2</b>			
Site #	Name	Feature of interest	Audit team notes
	Auditors arrive @ Atlanta FO	Opening Meeting and FMU & District Briefs	FMU consists of 280,000 acres. Special features beyond timber production include an elk herd, habitat for Kirtland's warbler and other RTE species, game species, the Black River habitat improvement area, and several recreational opportunities.
1	Blind Squirrel	Red Pine Sale already cut, follow up cultivation treatments in progress	Discussion on compartment and public review processes, HR issues, and remuneration. Natural red pine stand with oak component that received overstory removal. Little to no retention within unit, but retention relegated to edge of unit and tracked in state databases for long-term tracking. Site was herbicided and will be replanted with red pine.
2	Spring Lake Jack Oak	Active Timber Sale	Interview with logger. Discussion of training, safety, site specifications, and marketing of forest products. Jack pine-oak stand clearcut with retention islands and oak-aspen stand thinning to promote oak and remove declining aspen. Discussion with DNR staff on training plans and implementation of training plans, as well as the types and amount of trainings conducted annually.
	Lunch	Shupac Lake SF Campground	Observation of recreation area.
3	Loon Lake	ERA	Karst topography complex. Discussion of plant communities and measures for delineating and protecting this ERA.
3A	Roller Chop Site (extra site)	Red Pine cultivation work	Observation of active trenching operation to replant with red pine. Discussion with operator about how to operate around retention elements, such as snag and retention islands. Discussion with operator about remuneration and safety measures, and observation of safety measures such as First AID kit, spill kit, and tools.
4	634 Bruised Oblique Timber Sale	Aspen Timber Sale, already cut	Aspen regeneration cut with retention of oak and pine (scattered and island)

5	6 Mile Combo	Hdwd Thinning, Aspen harvest	Aspen clearcut with at least two retention islands adjacent to hardwood thinning. Discussion about stakeholder communications over impacts of operations.
6	Rib Rack Timber Sale	Oak and Aspen Harvests, adjacent to Bear Den Lake	Aspen clearcut with lake 100' lake zone buffer and retention of white and red pine within stand. Aspen and jack pine retention at edges of unit. Other area of sale was a clearcut with several two-acre retention islands of oak-jack pine prepared years prior for wildlife management.
7	Road Work Project	Fixed several mud holes and a hill side spring	Road regraded, elevated in some spots, and graveled. Catch basins installed in strategic areas to keep adjacent stands dry.
8	Decheau Lake, Wildlife Opening Maintenance	Planted rye and buckwheat in maintained opening, would be at end of tour. Elk Management	Discussion of elk herd management and protection, and rotation of associated crops
<b>Atlanta FMU Recertification Audit 9/28/15 - Tour 3 Alpena County</b>			
Site #	Name	Feature of interest	Audit team notes
1	Cranberry Creek sale, near Devils Lake on Piper Road	Stakeholder complaint regarding regeneration harvest	Cranberry Creek sale, near Devils Lake on Piper Road: ~34 acre clearcut harvest of jack pine-scrub oak timber cut during winter 2014-2015. The harvest was included in the 2011 compartment review and open house, generating considerable stakeholder interest. The tract is in an area of recreational cabins about a mile west of the Lake Huron shoreline. The harvest area is linear in shape, positioned between a township road and a railroad track on the east and a shallow wetland lake and alder/willow marsh (known as "Devil's Lake", a former cranberry farm) on the west. Stakeholder comments at the time indicated concern about aesthetic management (some referring to the area as a "park") and perceived loss of deer habitat. To help explain the department's harvest proposal, a stakeholder meeting was convened at a neighbor's cabin in 2011. Email's after the event say that about 50 people came, including a local State Representative. The tour included the proposed harvest and a nearby stand that had received a similar treatment a few years earlier. Speakers included forestry and wildlife staff. DNR notes indicate that most tour attendees (including the State Representative) seemed to appreciate the reasons and benefits of the harvest.

			<p>A few, however, did not and they petitioned the DNR Director to review the case. The Director delegated Chief State Forester Lynn Boyd to respond, and her letter affirms the department’s decision to proceed with the harvest. According to Michigan regulations, the Director’s decision is final. The only other recourse would have been for the complainants to seek a court injunction, which they did not pursue. The organization has a dispute resolution process, which was followed.</p> <p>Some stakeholders responding to the SCS input request suggest that a trail leading to the old cranberry farm water control structure was a “stagecoach road” that should have been protected. DNR says there is no historic road record in the archeological/cultural features database. Auditor observed that the trail is still visible and was not damaged during the harvest. The old water control structure continues to be accessible. The harvest itself is also consistent with responsible silviculture for the timber type, aspen-oak regeneration is developing, and the site will provide desirable wildlife habitat.</p>
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<b>FMU Recertification Audit 9/29/15 - Indian River Tour</b>			
<b>Site #</b>	<b>Name</b>	<b>Feature of interest</b>	<b>Audit team notes</b>
	Auditors arrive @ Gaylord FO	Opening Meeting and FMU & District Briefs	Presentation on MiFi System used to track forest inventory and stand treatments over time.
1	DC Hardwood	HWD selection closed, Motorcycle Trail	Interviews with staff on training, HR issues, and remuneration. Hardwood selection harvest with slash levels reduced to heights conducive to motorized recreation.
2	Sunshine Hardwood	HWD Selection active, Motorcycle Trail	Hardwood selection harvest. Discussion on monitoring and contract conditions allowed for flexibility due to weather and timing constraints. Contract marked and reviewed after marking for den tree and other retention specifications. Interviews with staff on training, HR issues, and remuneration.
3	LUNCH	At roadside park south of Wolverine	Interview with state park staff.
4	Gastrocnemius Red Pine	RP clearcut/removal, plant RP, partially cut but not active	Low part of site managed for higher quality red pine and ridge area for red pine-hardwood mix. Discussion of invasive species prevention and treatment.

5	Pretzel Logic Red Pine	RP clearcut, HWD MO, planted with oak saps, SFCG nearby	Discussion of invasive species prevention and treatment. Interviews with staff on training, HR issues, and remuneration. Unit of red pine clearcut with retention island of red pine; unit will be allowed to revert to aspen and hardwood for wildlife objectives. Some conifer component will remain. Other unit was clearcut and had oak retention. Supplemental planting of red oak was done due to forest health concerns over loss of beech.
5A	Unscheduled Resource Damage Report		Interviews with law enforcement and fisheries staff about repairs conducted to remedy damage to hill entrance to a lake. Cooperation between various departments to install boulders and gate, regrade slope, and plant trees and grasses to hinder unauthorized access.
7	Witches Broom Pine/Oak	Jack pine/oak clearcut, closed, natural regen, RX burn after harvest, snowmobile trail, ORV trail, Trailhead	Jack pine-oak clearcut. Discussion of possible use of prescribed fire to reduce soft-mast competition and slash and favor jack pine-oak regeneration for wildlife. Retention of scattered oak and pine for mast.
7	Schmelting Oak	Oak clearcut, open but not active, natural regen	Clearcut to release established oak regeneration. Retention of scattered oak and pine for mast. Discussion of operations and forest health, such as any measures taken to prevent the spread of oak wilt.
8	Woodcock Mix	Active clearcut, stakeholder complaint	Examination of stream buffer on marginal trout stream flowing over glacial outwash sand. Buffer is over 100'. Red pine and hardwood removal within unit. Complaint received over trout mortality during hot weather and active operations. Fisheries biologist explained to stakeholder that fish likely died due to heat not linked to harvest operations.

**FMU Recertification Audit 9/29/15 - Gaylord Tour**

Site #	Name	Feature of interest	Audit team notes
1	Manuka Lk	Hdwd final harvest-MO is mx deciduous & aspen & aspen/oak-open	Aspen and upland hardwood clearcut with good snag and single/group retention placed as a visual buffer along public road. Well documented timber sale inspections.
2	Valleyview	Hdwd selection-active/rec trails/trespass	Active northern hardwood timber stand improvement cut. Interview with Corey Yoder - logger. No spill kit on-site. Timber Sale Inspection form dated 8/27/15 did not indicate whether the SFI logger core training had been verified. Well documented timber sale inspections.
3	Missed Buck	Hdwd - eagle	Poor quality aspen clearcut with no live retention

		occurrence/modify contract/RDR	and good snag retention. Active eagle nest approx. 1,000 from the sale boundary. The National Bald Eagle Management Guidelines were followed. Timber Sale Inspection form dated 5/16/15 did not indicate whether the SFI logger core training had been verified although the file did contain a printout of the loggers training history. Well documented timber sale inspections.
4	Demannu	open-clean up	Northern hardwood timber stand improvement cut with no issues. Good stocking and minimal damage to residuals. Well documented timber sale inspections.
6	Dontzs' Delight	closed /aspen regen	Aspen regen with white pine retention. No issues. Well documented timber sale inspections.
7	Old Hardwood nursery (historic)	snowmobile, NCT, pathway trails,	Old hardwood nursery with concrete dam and foundation remnants.
Bonus Site	Spring Brook Bridge Replacement	Snowmobile	Replaced matt bridge with 12' wide steel bridge. Partially funded by the snowmobile association. Grant approved because DNR will donate the equipment and labor to install.
9	Flatlander Hdwds	Hdwd selection-open/ash salvage	Northern hardwood timber stand improvement cut with no issues. Good stocking and minimal damage to residuals. Well documented timber sale inspections.

Traverse City FMU Recertification Audit 9/30/15 - Tour 1 (Kalkaska County)			
Site #	Name	Feature of interest	Audit team notes
1	<b>Oakey Pokey (sold, inactive sale)</b>	Recreation, arch site, oak silviculture	67 acres – Marked oak shelterwood harvest (sold but not cut). Historic Preservation Officer helped field staff buffer a native archeological feature, found after checking the related GIS layer during the stand exam. Sale modifications were made to address potential impacts on adjacent recreational uses (designated quiet area, North Country hiking trail, and a campground). Although it might have been easier to regenerate oaks using a clearcut regeneration system, the foresters chose a less disruptive shelterwood system that leaves more trees. They also coordinated remove of decadent trees from a contiguous county road ROW at the request of the county road department.
2	<b>Smith Lake</b>	RDR, oak wilt, recreation MTB proposal	Two issues – an oak wilt control pocket and a Resource Damage Report related to repair of an unauthorized sand trail along an undeveloped lake shore. A vibratory plow will sever the roots of infected oak trees to create a barrier zone barrier

			to stop disease spread. Unauthorized lake access trail was blocked with cedar logs, and jack pine seedlings were planted in the exposed sandy soil. Youths (apprehended and cited by a Conservation Officer) who were responsible for some of the site damage after a drinking party are providing restitution through labor to clean up the site.
3	<b>Log Local (sold, inactive sale)</b>	Recreation, silviculture, RTE sp., salvage	28 acres – Marked regeneration/blowdown salvage harvest, sold but not cut. The timber sale adjoins an equestrian camp, prompting appropriate reserves and careful placement of a log landing. Seasonal restrictions on cutting will also help minimize conflicts with recreational users. Auditors walked around the tract and observed excellent retention of hemlock inclusions and marked hardwoods. Discussion on-site covered use of Wildlife Action Plan and other training to help foresters be aware of habitat improvement opportunities.
4	<b>Garfield Twnshp Park</b>	Manistee River access site	Manistee River Access: A few years ago, the County Highway Department and DNR recognized a dangerous situation where boaters were accessing the Manistee River from a highway road bank. A recreation grant funded a new parking area, access ramp and toilets. Stair steps were installed to prevent erosion of a sandy hill descending to the river. An invasive species warning sign is posted next to the river ramp advising boaters to check for zebra mussels.
5	<b>243 Northern Blend (active sale)</b>	BMPs, wetland silv.	80 acres – Timber sale composed of four blocks, including aspen clearcuts and red pine plantation thinning. The harvest was mostly complete, but the cutter recently moved equipment to another site to avoid excessive rutting. Forester indicated concern about soil compression in one wet spot and had the logger block the route with brush to prevent further damage. Auditors observed excellent retention including mature aspen, snags and wetland buffer strips.

6	<b>S. Sharon Barrens rx burn</b>	rx burn, wildlife objective	131 acres – Grasslands Barrens maintenance. This sandy flatland grass/brushland was burned in spring 2015 to set back cherry brush and ferns. The work provides habitat for wild turkeys and a variety of birds including Kirtland warblers, meadowlarks, bobolinks, sparrows and woodcock. Wildlife manager said a grant funded by turkey hunting license fees paid for the work. Burns will be conducted of a 3-5 year rotation. Burn plans are included in the annual compartment review and are open to stakeholder comment. Maps of prior-year burns are also posted on the Internet as mushroom gathering prospects.
7	<b>Should-a Wood-a (active sale)</b>	Auditor choice; mult. stops; BMPs, recreation	52 acres. The aspen/oak harvest is traversed by Big Cannon Creek, and so the auditors focused on RMZ protection. A buffer, sometimes exceeding the 100' minimum, had been marked by the foresters and avoided by the loggers. Access roads from the north and south negated the necessity of a stream crossing. Auditors observed excellent green tree retention within the sale area. The foresters brought in a wildlife biologist to locate a raptor nest that had previously been located in the block, but it was no longer present and so the record was updated.

8	<b>Where is North Oak (active sale)</b>	ORV route, salvage, HW/oak silv.	200 acres – Variable density, oak-northern hardwood intermediate thinning and group selection harvest designed to encourage oak regeneration. The sale was active at the time of the site visit. Residual stand is composed of well-space small sawtimber and pole-sized hardwoods. Auditors observed a careful harvest with little damage to the site or the residual trees. Auditors interviewed the timber producer. He stated that he had taken the state logging core training and annual refresher. He expressed an intent to send the entire 7-person logging crew to first aid training and to the February 2016 logging update. In a trailer at the landing, the logger had a bag of “Absorb-All” material, rags and spill kit pads to deal with oil leaks. He said spill kits are not located on processors in the woods because there is no place to put them. Logger was wearing a hardhat and had other PPE available. Logger said the crew works in shifts, operating around the clock. He estimated that it would take six weeks to complete the 200 acre tract. The log landing was equipped with overhead lights. He described the pre-harvest meeting conducted by the DNR sale administrator, whom he said visits the site at least once a week.
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**Traverse City FMU Recertification Audit 9/30/15 - Tour 2**

Site #	Name	Feature of interest	Audit team notes
	Auditors arrive @ Traverse City FO	Opening Meeting and FMU & District Briefs	330,000 acres spread over five counties with two field offices. Forestry, fire, fishery, and wildlife staff. Majority of FMU is within Kalkaska County. High level of recreation (16 camp grounds, trails, mountain bike races, etc.). Primary cover types are aspen, northern hardwoods, red pine, oak, grass openings, and jack pine. Kirtland's Warbler management areas in Kalkaska County. Military lands are outside of the scope of the certificate, but managed the same as other DNR lands.
1	Vasa-Bunker Hill Trail Head	Recreation area with sanitation-salvage selection cut due to oak wild and wind storm damage.	Discussion of DNR's strategic plan as it related to HR objectives, which will allow younger staff to transition into higher level position in anticipation of retirements. Interview with logger about safety and training; observation of proper safety equipment onsite.

2	<b>Twin Lakes Mix</b>	clearcut w/resid., riparian buffer; recently completed	Oak-pine-aspen clearcut with objective to regenerate the same composition. Retention of red and white pine and oak throughout diameter class to secure growth and allow aspen to regenerate.
3	<b>Hot Scrape Mix</b>	active sale, oak thinning (replaces Backwoods Oak)	Red and white oak thinning with retention of white and red pine. Objective to free growing space for residual stand through removal of aspen and red maple. Some openings created to allow aspen to persist. Interview with logger. Logger had training and safety equipment onsite. Logger was able to describe clean-up process from start to finish using spill kit.
4	<b>Carpenter Creek Burn</b>	wildlife burn: oak-pine barrens ERA; rec. trails	175 acres of oak-pine barren complex maintained through rotational prescribed burns conducted every 3-5 years in different blocks. Discussion of public review processes. Inspection of Carpenter Creek bridge replacement and cooperation with local townships and NGOs.
5	<b>Overview Red Pine</b>	completed RP thin; rec. trails	Third red pine thinning with retention of established hardwood and white pine. Stand is favoring hardwood and will likely be managed for a hardwood-pine mix. Small clearing made due to beetle damage to pine. Slash piled near bog to prevent recreational impacts to it and thwart motorized access.
6	<b>Townline Red</b>	RP final harvest replanted	Red pine clearcut with retention of oaks and pine. Trenching recently completed. Large woody debris distributed over site.
7	<b>Badger Pine</b>	active RP thinning	Third red pine thinning and aspen removal; some gaps created to allow aspen to regenerate. Interview with logger and observation of machinery repair. Spill kit located onsite.
8	<b>Jaxon Creek Aspen</b>	recently completed lowland aspen removal, road closure	Road closure due to recreational impacts; sand berm installed. Road will be repaired once road stabilizes. Aspen removed and pine-maple retained due to proximity to lowland areas. Managed for mast and cover for wildlife. Objective to maintain a multi-aged pine-maple stand.

<b>Gladwin FMU Recertification Audit 10/1 - Tour 1 - WEST</b>			
<b>Site #</b>	<b>Name</b>	<b>Feature of interest</b>	<b>Audit team notes</b>
5	Jonesville ORV Parking Lot	trail proposal, tsales near rec infrastructure	Access point for a number of ORV trails, adjacent to the Muskego River. Auditors viewed a trail bridge over the river, including a concrete paved approach designed to prevent soil erosion into the

			<p>water. Parking area included fences and barriers to keep ORVs on the trails and off the river banks. Discussion focused on a proposed six-mile Leota-Denton ORV connector trail that would originate here. The new trail would provide a legal access between two popular trails and help keep ORVs off State Forest roads, which are not open to their use. Foresters explained that an adjacent red pine plantation is being set up for thinning. Logging equipment will be able to cross recreational trails only at designated points. Log landings will be located away from trails, and harvest operations will be clearly marked with precaution signs.</p>
6	Rice Pond Barrens	ERA's, biodiversity, etc.	<p>Proposed 78 acre Pine Barrens restoration project. Tract includes a small, moderate quality barrens patch surrounded by a mix of jack pine and scrub oak timber. The timber is scheduled for harvest, with scattered large reserves. DNR intends to seek stakeholder input in an upcoming annual open house on designating the tract as an Ecological Reference Area. If approved, the entire tract will be burned after the anticipated harvest in 2017. Prescribed fire would likely be enough to help restore barrens conditions to the entire tract.</p>
4	Natural Kirtland's Warbler habitat site scarification	Testing different silvicultural systems, HCVA's, RTE's	<p>503 acre clearcut in Kirtland's Warbler Block 114. This is part of a 90,000 acre warbler habitat area where about 1,500 acres are regenerated annually for a mosaic of young jack pine – oak forest necessary for Kirtland's warbler breeding. Anchor chain scarification of the soil, the technique used here to stimulate natural jack pine regeneration as an alternative to the usual disk and plant scenario, appears initially to have been successful. DNR will make a survival survey next year, but they anticipate well above a minimum 800 seedlings per acre will be present. The good results may have been a function of favorable spring moisture. Overall, the Kirtland's warbler recovery effort is going well, with an estimated 2,365 singing males compared to the original goal of 1,000.</p>

3	Cemetery Mix Timber Sale	Closed tsale planted to red pine, Floodwood SCA	266 acre tract of jack pine and scrub oak was clearcut in 2014 and planted in spring 2015 with supplemental red pines (in addition to natural oaks and jack pines). Groups of mature, representative trees and snags were retained. Project records show the provenance of the seedlings, dates planted, contractor, weather conditions and other pertinent information that will be useful for evaluating results. This harvest illustrates the Area's decision to combine stands into larger timber harvest offerings. Staff point to economies of scale, higher bids, better natural regeneration survival (by overwhelming deer browse risks) and other management benefits related to combined stands.
2	Haskel Lake ORV Restoration	Successful restoration project, BMP's, etc.	Haskell Lake ORV Restoration: This project was designed to restore damaged lake shorelines and hills that had been torn up by unauthorized ORV traffic in an area closed to ORV use. Concrete barrier blocks were donated by a local business, and a \$15,000 grant was utilized to support contracted and volunteer efforts to make site repairs, install barriers and implement road improvements that discourage further abuse. A DNR Conservation Officer explained the enforcement actions being taken against violators.

**Gladwin FMU Recertification Audit 10/1 - Tour 2- EAST**

Site #	Name	Feature of interest	Audit team notes
	Gladwin Field Office	Introductions/Prep for field/Split into two trips	Refer to SFI report.
1	Old Secord Mix	Open contract- inactive, invasives, aspen cc, retention	
2	Wildwood Mix	Closed tsale- visual retention, FTP, rx burn, etc.	
3	Estey Blend	Open contract- possibly active - Replaces Saquaro Aspen	
4	ORV Scramble Area	Restoration project/tsale/road planning/coop road com	
5	Lame Duck Foot Access Area	HCVA's, GEMS	
6	Last Minute	Open contract- no	

	Aspen tsale	activity in a long time	
7	I-75 Harvest Tsale	Closed tsale- retention	
8	Jose Rd Oak Tsale	Listed by auditors	
	C132 Fire Salvage	Prescribed stands that were harvested early	

### 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:	5
C. Additional days spent on preparation, stakeholder consultation, and post-site follow-up:	4.5
<b>D. Total number of person days used in evaluation:</b>	<b>29.5</b>

### 3.1.3 Evaluation Team

<b>Auditor Name:</b>	Kyle Meister	<b>Auditor role:</b>	FSC Lead Auditor
<b>Qualifications:</b>	<p>Kyle Meister is a Certification Forester with Scientific Certification Systems. He has been with SCS since 2008 and has conducted FSC FM pre-assessments, evaluations, and surveillance audits in Brazil, Panama, Mexico, Costa Rica, Bolivia, Indonesia, India, Japan, New Zealand, Spain, and all major forest producing regions of the United States. He has conducted COC assessments in Oregon, Pennsylvania, and California. Mr. Meister has successfully completed CAR Lead Verifier, ISO 9001:2008 Lead Auditor, and SA8000 Social Systems Introduction and Basic Auditor Training Courses. He holds a B.S. in Natural Resource Ecology and Management and a B.A. in Spanish from the University of Michigan; and a Master of Forestry from the Yale School of Forestry and Environmental Studies.</p>		
<b>Auditor Name:</b>	Norman Boatwright	<b>Auditor role:</b>	SFI Lead Auditor
<b>Qualifications:</b>	<p>Mr. Boatwright has over twenty-eight years' experience in intensive forest management, seventeen years' experience in environmental services and ten years' experience in SFI auditing. He has conducted Phase I Assessments on over two hundred and fifty projects covering 2,000,000 acres, ESA and Endangered Species Assessment on timberland across the South, and managed soil mapping projects over 1.3 million acres. From 1985-1999, he was Division Manager at Canal Forest Resources, Inc. and was responsible for all forest management activities on about 90,000 acres of timberland in eastern South Carolina. Duties included budgeting and implementing land and timber sales, site preparation, planting, best management practices, road construction, etc. Norman is a Qualified Lead Auditor under the NSF-ISR SFI Program with extensive experience auditing procurement and land management organizations.</p>		
<b>Auditor Name:</b>	Anne Marie Kittredge	<b>Auditor role:</b>	Forest ecologist/ assistant FSC/SFI auditor
<b>Qualifications:</b>	<p>Anne Marie Kittredge is a Forest Management Lead Auditor with experience conducting audits for large and small private and public landowners. Anne Marie also conducts Lead Auditor Chain of Custody audits under the SFI, FSC and PEFC Standards, is qualified as a Lead Auditor (ISO 19011) and has authored &gt;500 reports for a broad range of landowners, manufacturers, distributors and brokers. Anne Marie has &gt; 20</p>		

	years of experience in traditional forest management, wildlife habitat management, marketing and utilization and forest cutting practices regulations. Anne Marie's experience as a state forester in Massachusetts focused on management of FSC certified state-owned forest lands, forest cutting practice regulation enforcement as well as private landowner assistance and current use certification administration. Anne Marie earned both MS and BS in Forestry from the University of Massachusetts in Amherst.		
<b>Auditor Name:</b>	Paul Pingrey	<b>Auditor role:</b>	Forest Management Specialist/assistant FSC/SFI auditor
<b>Qualifications:</b>	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.		
<b>Auditor Name:</b>	Jessica Leahy	<b>Auditor role:</b>	Auditor, Stakeholder Consultation
<b>Qualifications:</b>	Jessica Leahy is an auditor for SCS from Orono, ME. She earned a BS in Forest Recreation Resources and an MS in Forest Resources with a minor in Environmental and Resource Economics both from Oregon State University. Her PhD is in Natural Resources Science and Management with an option in Economics, Policy, Management & Society from the University of Minnesota. She has attended both ISO19011 training as well as FSC auditing training from SCS. Dr. Leahy has worked for 8 years as a professor in the School of Forest Resources at the University of Maine. She is actively involved in the Society of American Foresters at the state, regional, and national level. She also serves on the Boards of the Northeastern Master Logger Certification program and Small Woodland Owners Association of Maine. Dr. Leahy has participated in FM audits since 2006, which have certified nearly 4 million acres of public forestland and 2 million acres of private forestland.		
<b>Auditor Name:</b>	Ruthann Schulte	<b>Auditor role:</b>	Observer/ auditor trainee
<b>Qualifications:</b>	Ruthann has a broad range of natural resource management experience. While with Green Diamond Resource Company she coordinated the company's Forest Stewardship Council and Sustainable Forestry Initiative certifications as well as working on community relations and government relations issues. Prior to that she was Executive Director for The Buckeye, a non-profit organization dedicated to the long-term stewardship of forest and ranch lands. Ruthann participated on internal		

	<p>audit teams for ISO 9001 while serving as Advisor to a Board Member of the California Integrated Waste Management Board and also while Environmental Stewardship Director at The Pacific Lumber Company (PALCO). At PALCO, Ruthann additionally managed teams conducting watershed analysis and contributed to the development of a multispecies Habitat Conservation Plan. While working for forestry companies in California, Schulte coordinated crews and conducted wildlife and fisheries surveys. Ruthann has a B.S. in Biology from Siena Heights College in Adrian, MI and a M.S. in Biology from the University of Louisville in Louisville, KY.</p>
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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
<b>Economic Concerns</b>	
<p>As a customer/stakeholder of the Michigan DNR timber sale program, we have the following input for your FSC audit of the Michigan DNR.</p> <p>It is important to us that timber sales be offered for sale evenly throughout the year. There have been times in the past when the MDNR timber sales were offered in “bunches”. It seems that late winter/early spring was a time when there would be a lot of timber sales offered at the same time. It is difficult for us to review/cruise the sales adequately with the time constraints tied to them; Particularly in the late winter when deep snow makes access problematic. Conversely, during the late summer/early autumn, there have often been very few timber sales offered by the MDNR. It would</p>	<p>Through interviews with DNR staff and an examination timber sale data, SCS confirmed that FY2009-14 that many timber sales are released between the months of March and June (a range of 62-74 sales per month on average during these times) that fewer are released July to February (a range of 36-62 sales on average during those months, with lower points occurring in September and November). Note that this analysis does not address variation between months of different years or variation between years. The release of sales mostly is due to seasonal climate, followed likely by hunting and vacation seasons. DNR also has several timber sales that do not receive any bids, most of which occur in the Northern Lower Peninsula. Fewer no-bids occur in the Western Upper Peninsula. So there is regional variation in how bids are reviewed and/or received by timber sale purchasers. DNR has received comments from certain regions in the past on</p>

<p>be helpful to us to have these sales evenly spread out throughout the year. Another issue is the number of seasonal cutting restrictions on some of the sales. Harvest timing is often restricted by some of the following: slippery bark season in the spring, snowmobile trails in winter, hawk nesting in the spring/summer, wet ground in spring and fall, oak wilt in the early summer, etc. Some contracts may only have ½ of the contract period available for harvesting. Perhaps the DNR could provide longer contract periods for those timber sales with several harvest timing restrictions. The compartment review process of the MDNR allows them to inventory 1/10 of their forested lands each year. This is a good goal to make sure all the lands are inventoried at least once each 10 years. However, the subsequent timber sale program causes a lot of timber sales to be offered in the same area at the same time. This sometimes causes transportation congestion on sandy or gravel roads. With multiple timber sales occurring simultaneously, the County Road Commissions will sometimes shut down timber sale activity to protect sensitive gravel roads. Perhaps the MDNR could spread out their timber sale offerings throughout their entire timber management unit to reduce road damage from concentrating logging activity in one portion of their land base. Overall, we have a very good relationship with the MDNR. And we believe they are doing a good job of managing our State Forest lands. This sustainably managed timber base is very important to us as a stakeholder of the MDNR timber lands.</p>	<p>the perceived lumping of sales. Lastly and most importantly, DNR is in the process of upgrading its inventory and timber sale management systems, which will allow it to collect more data and complete more analyses on how timber sales are managed. Over time, the results of these analyses may be used to respond more specifically to regional concerns over the release and timing of timber sales, including clustering.</p> <p>As for restrictions on harvest due to forest health, weather or soil conditions, DNR currently allows for its three-year contracts to be extended by up to two years. This is consistent with what is allowed in neighboring states on timber harvest contracts. Moreover, timber harvest restrictions are consistent with protection of the residual stand and preventing the spread of pests and pathogens to other areas of the state.</p>
<p>Thank you for the opportunity to provide input regarding the forest management of Michigan’s State Forest System. The Michigan DNR has made significant improvements over the last 5 years, but as always there are significant opportunities for improvement. While generally supportive of the Department’s efforts in a very complex social,</p>	<p>1. SCS had the DNR timber sales specialist conduct a query to determine how many timber sales are being driven by salvage as opposed to normally scheduled year-of-entry. The current timber sale management system does not allow for tracking based on sanitation-salvage treatments, but DNR’s new one, VMS, will. Based on the names of timber sales for FY2014, about 6% of the timber sales contained the word ‘salvage’ (35 of 600). VMS will specifically allow for the tracking the</p>

<p>economic and ecological system, I'd like to briefly touch on 3 areas of concern.</p> <p><b>1. Healthy Sustainable Forests</b> - There are several concerns related to this issue.</p> <p>a. The DNR is doing a better job identifying and scheduling for treatment salvage opportunities. <b>However, the fact that there are a lot of unhealthy situations indicates that rotations are often to long and treatment entries are often extended, increasing mortality and decreasing net growth, decreasing economic opportunity, and reducing the social benefits of a healthy forest (relative to the potential).</b></p> <p>b. There is a lack of investment in forest infrastructure.</p> <p>c. There are opportunities to invest in silvicultural improvements that are not being made do to a perceived lack of capital.</p> <p><b>2. Timber Harvest</b> – The commercial timber harvest as well as the maintenance of a healthy forest system is less than the potential. If the variance was in the other direction (greater than the potential) there would be significant discussion about how this impacts some of the FSC principles. The current variance should trigger a discussion around FSC principles 5. The State forest system is the dominate ownership in many Northern Michigan Communities and much more could be done economically, socially &amp; ecologically.</p> <p><b>3. Deer Impacts</b> – Whitetail deer impacts to the ecological system are well documented (<a href="http://michigansaf.org/Tours/05Deer/1-MainPage.htm">http://michigansaf.org/Tours/05Deer/1-MainPage.htm</a>). In the Upper Peninsula the significant negative impacts are generally in the Lake Michigan and Lake Huron snowsheds. Portions of the DNR remain in institutional denial regarding this very important issue. There is also a healthy dose of “shoot the messenger” making resource professionals reluctant to discuss this issue (The Michigan Society of American Foresters has a position paper (<a href="http://michigansaf.org/Business/PosStates/1-MainPosStat.htm">http://michigansaf.org/Business/PosStates/1-MainPosStat.htm</a>)).</p> <p>4. The negative impacts are significant, long</p>	<p>timber sales by type, including salvage. Coupled with the new inventory system, MiFi, this should allow for analysis of scheduled year-of-entries based on growth rates and possible uses of harvested products. It should be noted that in past years that economic analysis based on possible uses for has been used to justify some reductions in rotations, such as for red pine stands.</p> <p>SCS noted during site inspections that exotic invasive pests and pathogens have been driving many timber sales in northern hardwood stands, which is a situation largely out of the DNR's control. DNR has been responding by scheduling timber sales in affected or potentially affected stands prior to scheduled year-of-entry. Timber harvest delays observed were due to stakeholder issues and no-bids. In one area of the state, DNR has responded to the higher amount of no-bids by lumping smaller sales into larger ones.</p> <p>As observed during site inspections, DNR does not always have authority over forest infrastructure. Many roads are owned and managed by local county road commissions. Areas of improvement where DNR has had more success is assisting counties in seeking funds for road repairs and upgrades, and upgrading stream crossings with bridges or larger culverts through cooperation with local governments and NGOs. Some upgraded stream crossings were observed in the field where DNR did not have full authority over the road system, yet worked with other parties to accomplish the planning and installation.</p> <p>DNR's wildlife division helps to pay for pre-commercial thinning, especially to release confers, which was observed during a few site visits. Outside of that, DNR does not practice much pre-commercial thinning or timber stand improvement work (TSI), according to interviews with staff.</p> <p>2. DNR's re-entry period for northern hardwoods is 15-20 years depending on site conditions such as soil and climate. The stands come up for review every ten years, but DNR is allowed to schedule the work 5 years hence, allowing for the 15 year cycles in some cases, though there is usually not enough accumulated growth from one 10-year compartment review cycle. Due to difference in site conditions, usually basal area is used</p>
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<p>term, and cumulative directly impacting FSC principles 5, 6 &amp; 8. This audit trail can be quickly picked up by interviewing current and past MDNRE managers who have worked in the Lake Michigan and Lake Huron snowsheds as well as other resource professionals who work in these areas.</p>	<p>to determine the prescription. The only stand observed that was harvested after the 15-20 year harvest window during the audit was due to a stakeholder concern over visual impacts and road maintenance. SCS did not observe any other situations where harvest was delayed in northern hardwood stands. As previously mentioned, exotic pests are largely driving the forest health problems in northern hardwood stands. Some of these stands have lost so much basal area due to exotic pests and pathogens that DNR might not be able to enter them again for three or four compartment review cycles.</p> <p>3. SCS has had several discussions with DNR and stakeholders of this region over the years. DNR is under pressure from other stakeholder groups to avoid any changes to deer herd management that would result in short- or long-term changes in hunting success. Due to the number of parties involved in deer management, this is an issue that certification cannot solve on its own. While SCS did not visit the UP on this trip, the audit team did not observe any regeneration failures due to deer on this audit. It also warrants mention that deer populations are down in the UP due to back-to-back harsh winters, so the problem has alleviated somewhat. Regardless, the DNR is taking action to address regeneration in stands affected by deer browse and invasive species/disease (EAB and BBD) by funding a new a 6 year project, \$1 million research project in partnership with Michigan State University (Dr. Mike Walters and Dr. Gary Roloff) entitled: <b>Silvicultural approaches for promoting diversity and sustainability in Michigan’s northern hardwood forests.</b></p> <p>4. Statewide, Michigan’s forests are becoming more mature according to FIA data, which includes state, federal, and private lands. Without further information, it is not certain that DNR-managed lands are the location of the “large” trees. This imbalance in age classes may be more a US Forest Service (USFS) and private land issue. The “Good Neighbor” program between DNR and USFS that was recently arranged could help address this issue. The “Good Neighbor” program will allow for the exchange of information and management techniques between the USFS and DNR, as well as allow for DNR to actively manage USFS lands.</p>
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	<p><b>Figure 4.—Timberland by stand-size class and year, Michigan.</b></p> <p>Source: Pugh, Scott A. 2015. Forests of Michigan, 2014. Resource Update FS-35. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.</p>
<p>The level of political interference in policy decisions made by forest managers is too great. This has been particularly evident during the reign of Senator Tom Casperson as the Senate Natural Resources Committee chair. Matters related to natural areas protection, sustaining biological diversity and establishing statewide harvest objectives seem to be influenced by political forces to too great an extent.</p>	<p>While how politicians influence forest and conservation policies is usually outside of the scope of FSC, recently DNR has been able to achieve conformance to biodiversity and natural areas protection and make some significant improvements in classifying Ecological Reference Areas (ERAs) within lands under its jurisdiction. Other stakeholder groups have been very supportive of this endeavor, especially since ERA classification and management is compatible with several of DNR’s public mandates, including protection and conservation of biodiversity such as threatened &amp; endangered species, enhancement of hunting &amp; fishing opportunities, and harvest and commercialization of timber products. More information on ERAs is available here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_39170-343969--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_39170-343969--,00.html</a>.</p>
<b>Social Concerns</b>	
<p>Having worked with multiple divisions of MI DNR over the last 20 years, I would give them 5 stars. It’s remarkable to become certified with all of the indicators. MI DNR is conscientious. ATV use is getting more connected. Habitat is getting an emphasis. Early successional habitat is a win-win. They are on the climb up.</p>	<p>Duly noted. The audit team observed several instances of collaboration between divisions within the DNR and even between DNR and outside stakeholders on a number of projects, including stream crossing upgrades to reduce the impacts to trout streams while allowing people access to public lands. Within early successional habitats (e.g., aspen stands), DNR has been retaining islands with aspen, pine, oak, and other species to ensure more heterogeneity within even-aged management units.</p>
<p>DNR is actively participating in the SFI SIC and going above and beyond to provide invasive species and sensitive habitat logging</p>	<p>Duly noted. The audit team interviewed a new DNR employee charged with coordinating a state-wide effort on prevention, control and mitigation of terrestrial</p>

<p>technique training to the larger group. The relationship between DNR and MFPA is the best it's ever been.</p>	<p>invasive species. See <b>OBS 2015.2</b>.</p>
<p>Overall, I believe Michigan's state forests are well managed and the staff of foresters and biologists deserve good grades.</p>	<p>Duly noted. See previous observations about collaboration among DNR staff.</p>
<p>There is an inadequate forest access plan. There are way too many roads and trails used by motorized vehicles. The proliferation of an array of all-terrain vehicles has aggravated the situation. New timber sale access roads are usually blocked off adequately following harvests, but too often barriers are breached and never fixed. It's like a capillary system. If you want to find a quiet place to go deer hunting, it's hard to find a spot more than 300 yards from an accessible road or trail.</p>	<p>As can be inferred from the varying responses from stakeholders on the issue of construction and maintenance of the road system, there are several user groups on state lands that each desire specific road conditions and access. It must be noted that many roads that provide access to state lands are not owned or managed by DNR; these roads typically fall under the county's jurisdiction. Given its efforts to coordinate road management with county commissions, use of law enforcement patrols to detect illegal or unauthorized activities, and attempts to include many different public user groups on forest roads, DNR meets FSC requirements for road management. In cases where damage to roads and other resources has been detected, DNR issues a Resource Damage Report (RDR). RDRs must be corrected within a certain timeframe according to procedures. Stakeholders are welcome to report road damage to DNR staff, including law enforcement. No non-conformance is warranted.</p>
<p>Interactions with coordination on road maintenance with us as a county road commission is good.</p>	
<p>An ORV representative is happy with DNR support of ATV trails and getting them connected in the UP. Finds their forestry conscientious, wildlife habitat is getting an emphasis. Happy with early successional habitat.</p>	
<p>A county road commission reports good interactions with coordination on road maintenance.</p>	
<p>A tribal representative communicated issues of disagreement around whole tree removal in aspen regeneration, size of individual clear-cuts, chipping the tops as a part of whole tree removal, and riparian corridor widths. There are severe gaps in archeological surveys along [site name redacted to protect confidentiality of tribal resources], as well as other factors neglecting a level of evaluation of travel corridors for wildlife, large woody debris recruitment in streams, and medicinal plant habitats affected by present forest practices. The tribal representative feels that there is little coordination or meaningful consultation between DNR and the tribe regarding forest management.</p>	<p>The lack of communication from DNR has been the result of a retirement, difficulties in refilling this position, and reassigning responsibilities in the meantime. Just prior to the audit, a DNR staff person was given responsibility to review these tribal concerns. Other DNR staff showed email records of past communication with the representative on similar comments made on other sales and have conducted site visits with this person.</p> <p>Review of email records during the audit makes it clear that DNR is now following up with the representative to discuss the concerns presented. According to DNR staff, the chipping that is occurring was due to a request from the Wildlife Division. It was a natural opening on which Wildlife Division prescribed that rye be planted. Wildlife Division requested that some of the chips be left in this opening so that they could be</p>

	<p>worked into the soil.</p> <p>During site visits, the audit team verified that riparian buffer widths and management practices were being followed. While only a few chipping sites were visited, SCS did not observe whole tree removal; tops were left onsite. DNR fisheries staff also have reviewed woody debris recruitment on streams and have conducted some woody debris placement projects that were observed during site visits.</p>
<p>A tribal representative said that DNR has allowed land to be sold. Stated there are interesting dynamics are going on. State objectives do not always mesh well with tribal objectives. Interactions have gotten better, there is more open discourse, MI DNR is sending things to review on a fairly good basis. The tribe is now invited to meetings. This is new in the last 3 years.</p>	<p>All DNR land sales are announced publicly on its website (<a href="http://www.michigan.gov/dnr/0,4570,7-153-10368_27230---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-10368_27230---,00.html</a>). Public notice is also provided here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-10368_12831---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-10368_12831---,00.html</a>. All land sales undergo a review process to ensure that lands offered for sale meet one or more of the following criteria 1) lands for sale do not meet DNR's strategic objectives for forest production, recreation, and conservation; 2) sale or exchange of a parcel will allow DNR to acquire another property that meets its strategic objectives, such as acquiring an inholding or expanding the size of a campground or protected area.</p> <p>The audit team verified records of meetings that DNR has had with tribes 2014-15, thus confirming that meetings and informal interactions are occurring on a more consistent basis between DNR and the tribes.</p>
<p>A tribal representative provided an example of a state recreational area as a place where MI DNR allowed the tribe to exercise its treaty rights to gather NTFPs through an MOU. The tribe has seen a lot of strides in MI DNR outreach efforts the last 18 months. MDOT has a great tribal liaison, DNR doesn't have savvy to do outreach. Consulted on technical matters, but not cultural matters. They would benefit from a tribal member as a liaison.</p>	<p>As previously mentioned DNR has had difficulty filling positions vacated by retirees and now has a dedicated tribal liaison. It remains to be seen how interactions between DNR and tribal representatives and members evolve. No non-conformance is warranted.</p>
<p>A tribal representative reported that they had good and bad interactions and consultations with MI DNR.</p>	
<p>The audit team received a lot of recreation user/local community comments coming in from the Atlanta State Forest in Alpena County. One in particular called the Cranberry Creek sale, near Devils Lake on Piper Road. According to stakeholders it was originally oak but now coming back as aspen.</p>	<p>The SCS audit team visited the site in question. Cranberry Creek sale, near Devils Lake on Piper Road is ~34 acre clearcut harvest of jack pine-scrub oak timber that was cut during winter 2014-2015. The harvest was included in the 2011 compartment review and open house, generating considerable stakeholder interest.</p>

<p>The public involvement process was unsatisfactory to stakeholders. Stakeholders said that some of them even walked the area with the area forester, and requested that a historic road be buffered. The harvest ended up going over the historic road and stakeholders felt like it was done in spite.</p>	<p>The tract is in an area of recreational cabins about a mile west of the Lake Huron shoreline. The harvest area is linear in shape, positioned between a township road and a railroad track on the east and a shallow wetland lake and alder/willow marsh (known as “Devil’s Lake”, a former cranberry farm) on the west.</p> <p>Stakeholder comments at the time indicated concern about aesthetic management (some referring to the area as a “park”) and perceived loss of deer habitat. To help explain the department’s harvest proposal, a stakeholder meeting was convened at a neighbor’s cabin in 2011. Emails after the event say that about 50 people came, including a local State Representative.</p> <p>The tour included the proposed harvest and a nearby stand that had received a similar treatment a few years earlier. Speakers included forestry and wildlife staff. DNR notes indicate that most tour attendees (including the State Representative) seemed to appreciate the reasons and benefits of the harvest. A few, however, did not and they petitioned the DNR Director to review the case. The Director delegated Chief State Forester Lynn Boyd to respond, and her letter affirms the department’s decision to proceed with the harvest. According to Michigan regulations, the Director’s decision is final. The only other recourse would have been for the complainants to seek a court injunction, which they did not pursue. The organization has a dispute resolution process, which was followed.</p> <p>Some stakeholders responding to the SCS input request suggest that a trail leading to the old cranberry farm water control structure was a “stagecoach road” that should have been protected. DNR says there is no historic road record in the archeological/cultural features database. Auditor observed that the trail is still visible and was not damaged during the harvest. The old water control structure continues to be accessible. The harvest itself is also consistent with responsible silviculture for the timber type, aspen-oak regeneration is developing, and the site will provide desirable wildlife habitat, including deer.</p>
<p>Public input, it seems, has been curtailed; open meetings to express opinion are no longer utilized or required. The DNR manages as politics demand.</p>	<p>DNR has several ways for the public to provide input. The process for public participation is described within <a href="#">“Managing Michigan’s State Forest: Your Guide to Participation”</a> and addresses all elements of this indicator. Public is notified of compartment reviews and open house meetings for each state forest. Pre-</p>

	<p>inventory meetings are also open meetings, but are not currently listed at the website. Data used in decision making is available. Decisions also can be appealed. The Freedom of Information Act (FOIA) process is used to respond to information requests. Tribal information is not subject to FOIA. Review of meeting records and interviews with other stakeholders both confirm that DNR holds public meetings and even engages with individual stakeholders upon request. No non-conformance is warranted.</p>
<p>I am involved with a group known as Friends of the Mason Tract. We have work closely with the DNR for the past six years. During that time I have grown to respect their professionalism and passion. However, I am disappointed by the high level of bureaucracy that inhibits their day-to-day operation.</p>	<p>As DNR is a public agency tasked with the management, conservation and protection of natural resources and services held in public trust, it must have staff that specializes in forestry, wildlife, fisheries, law enforcement, fire protection, recreation and other subject areas to ensure that it can complete its mission. While this can slow things down, DNR is currently investigating ways to make its process more efficient while meeting its public mandates. For example, the use of forest inventory and timber sale management software may allow staff to collaborate using a centralized interface and avoid the use of phone and email to plan projects.</p>
<p>An NGO representative was satisfied and happy with management of the Pigeon River Country State Forest. MI DNR was reported to work closely with stakeholders in the field. This person said that Forestry staff are a great asset to the organization, as are Fisheries and Wildlife staff. "They are "all in" on their efforts. They protect the special character of Pigeon River Country."</p>	<p>Duly noted. See previous observations about collaboration among DNR staff.</p>
<p>The MI DNR works pretty well with the snowmobile community on most issues.</p>	<p>Duly noted. Most stakeholders have reported a positive to neutral working-relationship with DNR.</p>
<p>We have had nothing but positive relationships with MI DNR.</p>	
<p>Here are my comments regarding the MDNR's forest management: 1) I appreciate the MDNR's efforts in diversifying their management prescriptions and in their attempt to educate the public on the benefits of having diverse forests from early to late succession. I would like them to put more efforts into identifying special and unique areas, communities, and pristine areas within management units, which would require more resources directed towards inventory</p>	<ol style="list-style-type: none"> <li>1. DNR has been able to achieve conformance to biodiversity and natural areas protection and make some significant improvements in classifying Ecological Reference Areas (ERAs) within lands under its jurisdiction. Other stakeholder groups have been very supportive of this endeavor, especially since ERA classification and management is compatible with several of DNR's public mandates, including protection and conservation of biodiversity such as threatened &amp; endangered species, enhancement of hunting &amp; fishing</li> </ol>

<p>and surveys. 2) I would like to see the MDNR encourage more private landowners to participate in the Commercial Forest Act program, and other private land stewardship programs. 3) Increase awareness/education of MDNR forest management goals and activities: I would like the MDNR to dramatically increase their efforts to let the public know about the benefits of MDNR forest management and working forests. The public needs to know the wildlife life benefits, economic benefits (local and regional), recreational benefits, forest health benefits, etc.</p>	<p>opportunities, and harvest and commercialization of timber products. More information on ERAs is available here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_39170-343969--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_39170-343969--,00.html</a>. Much of this work is being done in collaboration with the Michigan Natural Features Inventory.</p> <ol style="list-style-type: none"> <li>2. While other states offer FSC or PEFC certification to private landowners, Michigan does not. Thus this is outside of the scope of FSC and is for DNR to consider on its own.</li> <li>3. DNR conducts a number of outreach activities, including tours of actively managed state forests. DNR provided records of participation in state-wide SAF meetings and conferences 2014-15. For example, staff participate in local SAF, SFI IC and SFE meetings, and have volunteered with the Greening of Detroit on tree plantings and showing children from urban areas natural forests in the Northern Lower Peninsula. DNR’s website has a lot of information about forests and forest management, such as project learning tree and the children’s book “Who would want to cut a tree?”</li> </ol>
<p>I think over all they are doing a pretty good job. Seeing a lot more clear cutting which is not nice and would rather see select cutting and a little more thought in saving some of our forest around specific areas of interest to people using our forests. Seems the almighty dollar takes precedent rather than best interest of the people and forest in some locales. We have enough forest to keep aesthetics in the equation. Also seeing erosion in the cuts and not being cleaned up very well after cutting. We need to be holding harvesters accountable.</p>	<p>Within even-aged management areas (e.g., aspen and jack/ red pine stands), DNR has been retaining islands with aspen, pine, oak, and other species to ensure more heterogeneity within even-aged management units. This technique also provides wildlife cover and food sources, and ensures that there are sources of mature trees and standing dead trees within these harvest areas. DNR also maps these retention islands so that they can be tracked over time.</p> <p>Selection systems are not compatible with the regeneration requirements of the more shade intolerant species such as aspen and jack pine. Moreover, since these tend to have lower commercial value per unit harvested, using selection systems would render harvests uneconomical. Other timber types, such as white pine, may use more aesthetically pleasing even-aged (e.g., shelterwood) or uneven-aged management techniques (e.g., single-tree selection, group selection, variable retention). DNR does use selection in northern hardwood stands (i.e., maple-beech-basswood-birch-cherry) with single-tree selection typically used on the most fertile sites and group selection used on the least fertile sites to secure growth and regeneration.</p>

	<p>The audit team did not observe any significant erosion or fuel/ lubricant spills within harvest units. Woody debris left within harvest areas is beneficial for nutrient cycling and wildlife such as ground birds and reptiles. No non-conformance is warranted.</p>
<p><b>Environmental Concerns</b></p>	
<p>We are happy with consideration of fish habitat, use of science, and communication.</p>	<p>Duly noted. See previous observations about collaboration among DNR staff, invasive species, and educational opportunities for the public.</p>
<p>DNR is actively participating in the SFI SIC and going above and beyond to provide invasive species and sensitive habitat logging technique training to the larger group. The relationship between DNR and MFPA is the best it's ever been.</p>	
<p>Forest management, fisheries and wildlife are doing magnificently. Very impressive. Biologists are out in the field, collecting data, identifying needs, listening to user groups, and conveying messages. They have good communication. They work closely with the local units of government. They work well with Trout Unlimited.</p>	
<p>MI DNR Forestry is pretty good for the trees (timber). If you look at habitat requirements for deer, hare, woodcock, turkey, etc. -- it's not there. Any given compartment, they are not meeting their habitat goals. Forestry and Wildlife have an equal say but not enough wildlife being included. They don't do things that were agreed to with regards to wildlife. Restricted funds for turkey – the money is there to provide habitat. Deer hunting is pathetic. A retired wildlife biologist is a friend of mine and he's not seeing deer. There are not enough openings, they've gone to farms.</p>	<p>Deer and other wildlife populations fluctuate due to several factors, including the availability of suitable habitat. Currently, DNR is among the few land managers in the region managing for early successional habitat that is good for deer, hare, woodcock, grouse, and turkey. The audit team observed special consideration for hunting grounds on DNR lands purchased with game license funds, such as planting more oak and retention of pine islands within hardwood clearcuts. Through an examination of inventory data, there is no evidence that DNR is significantly behind on compartment entries.</p> <p>Other factors influencing the deer populations include the past two harsh winters, disease, and changes in behavior. During hunting season, some deer spend more time hiding during daylight hours and only come out at night into open areas. Deer population also can vary within the state. Note the concerns of the timber industry in the UP on the impacts of deer browse on regeneration. No non-conformance is warranted.</p>
<p>As I look across state lands I am increasingly concerned that the DNR's current management/regeneration system is not</p>	<p>First of all, the history of DNR-managed land must be taken into account. Much of the land was heavily logged in the late 1800s to early 1900s followed by</p>

<p>sustainable in that it does not reestablish forest cover that is in any way comparable to that which is harvested or occurs naturally. The DNR is permanently altering both forest composition and architecture on a massive scale through their reliance on clearcutting followed by stand reestablishment from stump sprouts. Because of this Michigan now has many thousands, likely hundreds of thousands, of acres with multi-stemmed trees that resemble big bushes on our public forest land. Granted the land still has trees, so in a sense it is reforested, but what the DNR is currently calling sustainable management is not preserving the majesty of Michigan’s forested lands for future generations.</p>	<p>attempts to farm and severe fires that resulted in the loss of significant amounts of soil organic matter. Thus many DNR lands have poorer soils and tend to grow species that thrive in low nutrient or dry conditions, such as jack pine, aspen, red pine, and fir swamps. While DNR lands include some unique features and higher quality soils, a great deal of managed area includes species associated with poorer site conditions.</p> <p>Clearcutting and achieving regeneration through a combination of root suckering, stump and root collar sprouting, and natural seeding is commonly used in aspen stands, which do not tend to form as many multi-stemmed trees as in a group selection on a northern hardwood stand (the species of which tend to vegetatively reproduce via stump sprouts). Other clearcutting regimes, mainly red pine and jack pine, are regenerated through direct planting of seedlings or seed, though a few stands are regenerated through securing natural regeneration from seed (these conifers do not sprout). Within larger clearcut areas, DNR retains clumps of trees representative the stand in islands and/or at the edges of the sale boundary. These long-term retention patches are mapped and tracked within DNR’s inventory system.</p> <p>In addition to providing timber products, DNR’s use of clearcutting is also driven by conservation mandates, such as the recovery of Kirtland’s Warbler populations. While this species traditionally relied on a shifting mosaic of jack pine stands regenerated through natural or human-caused fires, as more humans have moved into these areas the potential for conflict over the use of fire, natural or otherwise, has increased. While the intensive site preparation alters microtopography, losing this avian species from the Michigan landscape is a greater threat.</p> <p>Within northern hardwood stands, mostly single-tree and group selection systems are used, which result in regeneration from stump sprouts and seed. Retention within these areas focuses on more vigorous individuals with some emphasis on deformed or declining trees for wildlife and nutrient cycling. Trees selecting for removal tend to be less vigorous and poorly formed, with some removal of multi-stemmed trees.</p> <p>DNR has several ways to mitigate the risk of</p>
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	<p>homogenizing the landscape through its timber management practices. DNR’s silvicultural systems are based on harvesting methods that mimic natural disturbance regimes that would be typical of those forest types. Where a harvest could result in losing a certain stand structure if implemented uniformly, DNR uses retention guidelines to ensure that these are maintained and/or recruited on the landscape. Finally, DNR has a network of protected areas that includes zones where only passive management (i.e., no timber harvest) is allowed.</p>
<p>As a stakeholder in the Michigan forests, I'd like to express my disappointment in the DNR. A few years back, the DNR was all abuzz about creating a 'biodiversity corridor' through the state whereby flora and fauna would/could have a continuous ribbon of diverse areas. Apparently, this plan has ceased without even a whimper. Yes, forests must be managed to remain healthy but must the state harvest solely for 'profit' vs old growth and aesthetic reasoning?</p>	<p>DNR has been able to achieve conformance to biodiversity and natural areas protection and make some significant improvements in classifying Ecological Reference Areas (ERAs) within lands under its jurisdiction. Other stakeholder groups have been very supportive of this endeavor, especially since ERA classification and management is compatible with several of DNR’s public mandates, including protection and conservation of biodiversity such as threatened &amp; endangered species, enhancement of hunting &amp; fishing opportunities, and harvest and commercialization of timber products. More information on ERAs is available here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_39170-343969--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_39170-343969--,00.html</a>. Much of this work is being done in collaboration with the Michigan Natural Features Inventory.</p> <p>The result of one such ERA review resulted in the recognition and protection of northern white-cedar swamp that qualifies as FSC Old Growth.</p>
<p>First, I am all in favor of the DNR managing the state's vast forest resources. "Just letting them grow" might sound nice to the average person, but sound management can add a great deal of value in many ways. I have felt for several years that not enough was being done, although recently, in Crawford County at least, the pendulum may have swung too far in the other direction. The state is obviously subject to political pressures. Tax dollars are scarce, but good forestry management can yield revenues to cover the costs. Of course, political pressures come from many directions. Taxpayers want to save money, recreational users want more services, environmentalists have their own agenda, and so on. Juggling that has to be</p>	<p>SCS interviewed the program services section manager, who provided an overview of costs and revenues for the FME. Revenue sources include appropriations, timber sales, and recreational fees. The trend is that timber revenue has increased since 2009 and appropriations have stayed steady. Budget projections are based on revenues for the past three years so that estimations remain low. This allows the FME to avoid planning for expensive or unsustainable costs, such as too many hires. The sections manager demonstrated a copy of the 2015 appropriations bill, which includes a budget for all divisions within the DNR. This serves as guidance for controlling costs. Most funding for the Forest Resources Division within DNR comes from timber revenue followed by smaller sources, such as recreational user fees. None of the divisions within the scope of the certificate are funded through tax monies;</p>

<p>tough, so I don't envy the DNR. But to be more specific, I do think that there is a tendency to follow the latest hot trends, without looking at the long term picture fully enough. Trees do, after all, take many years to grow! One current fad, in my opinion, is the emphasis on "new forests". Yes, new growth areas provide habitat for deer and ruffed grouse, and other benefits. But old forests also have value. Cutting them all down to make room for "new forests" will severely limit forestry management options for generations. In Crawford County, they have clear cut tens of thousands of acres, and it appears they are just letting them fill back in with low value aspen and brush. We'll have plenty of "new forest", but we won't see valuable timber again in our lifetimes. Maybe I'm missing something in the big picture, but it looks quite far out of balance to me.</p>	<p>all funding comes from user fees, timber revenue, grants, and private donations.</p> <p>The annual harvest level data reviewed by SCS indicate compliance that the rolling 10-year average harvest was 749,670 cords. The maximum sustained yield is estimated at 855,600 cords. Thus DNR remains well within the calculated sustained harvest limit.</p> <p>Extensive out of Year-of-Entry (YOE) salvage harvests of Emerald Ash Borer and Beech Bark Disease affected stands continued this year in the northern lower peninsula and eastern upper peninsula regions, which contributed to the higher volume in FY14. Corresponding updates of the forest inventory will account for these out-of-YOE salvage harvests in future annual work plans. These salvage harvests have had a visual impact on the landscape as several northern hardwood stands have had to receive heavier removals to lower the density of diseased trees and identify healthier individuals to retain. Northern hardwood forests tend to be what people associate with "old" forests on DNR-managed lands.</p> <p>In aspen, pine and pine-oak sites visited this year, the presence or risk of a disease called oak wilt has led to harvesting restrictions, removal of dead and dying oaks, and intense site preparation to curtail the spread of the disease.</p> <p>DNR's retention practices in aspen stands have been mentioned in other responses. Crawford County contains several thousand acres of glacial outwash sand (see Beth, A. Apple and Howard W. Reeves, 2007, Summary of Hydrogeologic Conditions by County for the State of Michigan. U.S. Geological Survey Open-File Report 2007-1236, 78 p.), which supports species adapted to drier, nutrient poor conditions such as jack pine and aspen. While these sites may also support smaller populations of oak and other pine species, they tend to be dominated by a single species or species group. Jack pine and aspen are shade intolerant and require large openings to regenerate. They are also shorter lived, faster growing species. So as long as DNR remains within its allowable harvest calculations, addresses forest health issues, and meets its retention guidelines, its harvests on aspen and jack pine sites present a low risk of loss of sustained yield.</p>
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<p>I believe managing for ‘biodiversity’, which protects ‘old growth’, should be as important to the DNR as any other approach. It seems that treating our forests like a crop, has become the overriding mind-set of the DNR. It is depressing to see that our “DNR forest protectors have become their calculating destroyers; for profit. Of course I know some forests must be cut. Of course. But, why [isn’t the DNR] protecting some areas for biodiversity, as well? Where are the designated ‘BIODIVERSITY’ areas? Genetic diversity is, without question, one of the most important things on the planet. Once it’s gone. It’s gone forever. The DNR doesn’t seem to care about this; otherwise, you would be managing large areas of our land for protection of biodiversity as the primary goal. Where are those management areas? We’ve been talking to the DNR about this for years and years. At one past DNR meeting, several of our Board members of the Friends of the Jordan River Watershed, personally delivered our organization’s concerns about this important topic (again), then heard one of the timber industry reps. say, under his breath: “That’s never going to happen,” like THEY were totally in charge; like the forests belong to THEM; like OUR forest are nothing more than \$\$\$.. for the timber industry. It’s depressing -- to say the least. BIOLOGICAL DIVERSITY MATTERS!!!</p>	<p>DNR accomplishes the maintenance and enhancement of biological diversity in a number of ways, including through the establishment of protected areas and in implementing practices within harvest units to ensure that local seed sources are maintained and that there is habitat for wildlife species.</p> <p>DNR has been able to achieve conformance to biodiversity and natural areas protection and make some significant improvements in classifying Ecological Reference Areas (ERAs) within lands under its jurisdiction. Several of these areas are already protected under DNR’s management, but some new areas have been added, including a cedar swamp that meets FSC’s definition of old growth.</p> <p>As observed in the field, DNR identifies and installs buffers on all water courses prior to harvest. DNR also identifies retention clumps and individual trees prior to harvest. While DNR does use supplemental planting, particularly on red and jack pine sites, it mostly relies on natural regeneration. Protection of sensitive sites and reliance on retention and natural regeneration are ways of ensuring that biodiversity is maintained within harvest units. Retention of dead woody debris onsite serves as wildlife habitat and is a part of the nutrient cycle. Working with wildlife and fisheries staff on harvest configurations and protection of special stand features, such as snags and deformed or nest trees, ensures that forest harvests also address habitat requirements.</p> <p>So despite any negative comments on biodiversity heard at a meeting, DNR implements several measures that are consistent with the protection of biodiversity.</p>
<p>The one area that I think they still seem a bit confused on is blurring the HCVF designation with the Representative Sample Area Designation. They designated a whole bunch of lands on and off their own land as Ecological Sample Areas – but seemed to use that designation to lump both HCVF and RSA – I have not really seen anyone do a good job with RSA... Perhaps helping them to clarify HCVF and RSA would be helpful.</p>	<p>While the processes used to classify High Conservation Value Forests (HCVF) and Representative Sample Areas (RSAs) differ in many ways, there is nothing in the FSC standard that says that one cannot combine the two under one designation as DNR has done with Ecological Reference Areas (ERAs). As long as DNR can continue to accurately identify and report HCVF and RSA types, it can refer to them under its own terminology, ERA. As the ERA designation was just approved, DNR is in the process of conducting a new round of stakeholder consultation on identifying HCV attributes in ERAs. Refer to <b>OBS 2015.7</b>.</p>
<p>I have no serious concerns with current</p>	<p>Currently, DNR uses BMP guidelines for water and soil</p>

<p>management of MI DNR managed forest lands. The development of guidelines regarding hazardous and toxic materials needs to get finished already. My sense is that the problem lies with the MI Dept. of Environmental Quality and differing opinions between several of its divisions. I believe that MDNR-FRD has prepared a draft document but it awaits approval. Deer remains an issue but with the high degree of pressure exerted by the hunting community to maintain or increase the herd size I see little opportunity to control damage to the forest resource. I suspect that heavy browsing by deer is an important factor in encouraging various detrimental invasive plants to get a foothold in our forests further impacting forest regeneration. Increasing demands on public forest land for many forms of recreation will probably increase the need for changes in management strategies to combat potential introduction of a variety of forest health problems ranging from fire to insect and disease. Looking further into the future, I suspect that it will be necessary to consider increased acreages of plantations of woody plants, more attention to forest genetics including opportunities to use genetically modified species, and increased use of pesticides and herbicides if our forests are to produce products and services society will need in the future.</p>	<p>quality (<a href="http://www.michigan.gov/dnr/0,4570,7-153-31154_31261---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-31154_31261---,00.html</a>) and for larger spills adheres to another DEQ protocol (<a href="http://www.michigan.gov/deg/0,4561,7-135-3307_29894_5959---,00.html">http://www.michigan.gov/deg/0,4561,7-135-3307_29894_5959---,00.html</a>). Both of these documents conform to FSC requirements.</p> <p>Deer browse and population have been discussed in other responses in this report. No areas on DNR forestlands were observed that had significant regeneration problems. While securing oak regeneration can be difficult on sites with more mesic competitors, no other sites were noted by DNR staff during the 2015 audit.</p> <p>DNR staff work with several recreational groups to ensure that environmental impacts are addressed in construction and maintenance of trails. Many recreationalists reported positive relationships with DNR staff. DNR law enforcement also works to detect illegal and unauthorized resource use. See <b>OBS 2015.2</b> on the incorporation of more methods to prevent the spread of invasive species.</p> <p>DNR does not use genetically modified organisms on the FMU and relies on natural and assisted regeneration using known genetic stock. None of the forests managed by DNR meet the FSC definition of a plantation. DNR also controls its use of chemicals on the FMU and, in fact, has committed to securing a derogation for FSC for use of any FSC-prohibited chemicals that are to be used to control invasive species. This demonstrates DNR’s commitment to transparency and stakeholder involvement on chemical use.</p>
<p>The efforts that Michigan DNR has spent being dual certified (FSC and SFI) is commendable. It shows progressive thinking, at least from the political and economic sides of the issue. That said, much more needs to be done to meet expectations (I believe) for FSC. To substantiate whether or not "science" is being used in planning for the sustainable management of a resource one must identify existing knowledge and knowledge gaps and evaluate plans and activities within this framework. For goals and objectives beyond timber production, I think the Michigan DNR</p>	<p>Snags and individual trees left out in the open tend to blow over during snow and wind storms. Also, if there are few dead trees on a site prior to harvest, few snags will be left behind.</p> <p>However, the audit team observed snags and green tree retention in clumps and dispersed individuals in even-aged treatments. For example, on a red pine final harvest, snags and live trees were observed. Some of the snags left behind had blown over after harvest and others were within live retention groups. In jack pine harvests visited, DNR mostly retained clumps of live trees intended to serve as legacies and recruitment of</p>

<p>has a ways to go to be "evidence based" that many of their current forest management practices are contemporary and use the best available science in ecologically sustainable practices (aka ecological forestry). My research and management are mostly directed to fire-dependent ecosystems in the northern 2/3 of the state and I work with Michigan DNR on a number of related activities. Although I readily acknowledge that we know very little about fire-dependent forest ecosystems in Michigan (this includes all conifers, and other species/forest types as well), the knowledge that we do have does not seem to make its way to the field. Worse still, this lack of knowledge does not seem to have caused concern with management. And I see little supporting evidence, consequently for many of the patterns resulting from silvicultural treatments if ecological sustainability is of interest. In particular, I am still concerned about the lack of biological legacies in many jack pine stands managed for Kirtland's warbler and other even-aged treatments in other conifer types; if these are to "mimic" stand replacing events, then where are the snags and coarse woody debris and residual structure of some trees (these "stringers" do seem to be increasingly managed for, I admit)? Moreover, I see little in the way of acknowledgement by MDNR forest managers that one must have fire as part of management of fire-dependent systems. More concerning is the seemingly simple lack of interest in research on such topics. And evaluations I have seen rely too much on "expert opinion," especially when the expert has little quantified skills in the ecosystem type and treatment being evaluated. Too often, I believe, Michigan DNR turn to Michigan State Univ. for feedback because of close proximity, not necessarily the expertise of the evaluator. In summary, I again appreciate the thought and efforts taken to be FSC certified. I think much more needs to be done to "walk the walk."</p>	<p>snags. In oak-pine harvests, there were fewer snags as many had blown over or were removed due to forest health concerns over oak wilt. Similar retention practices were observed within aspen harvests.</p> <p>A common point of disconnect between forest ecologists, ecological forestry advocates, and foresters often comes down to the level of operations. The more random or scattered retention is, the more difficult it is for harvesting equipment to operate safely and efficiently. This is why retention elements in even-age management units are often clumped, located near temporary or permanent roads or placed at boundaries.</p>
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## 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
<b>P1: FSC Commitment and Legal Compliance</b>	None noted.	None noted.
<b>P2: Tenure &amp; Use Rights &amp; Responsibilities</b>	FME is making consistent and regular progress in resolving non-timber trespass issues.	None noted.
<b>P3: Indigenous Peoples’ Rights</b>	FME has at least six staff dedicated to attending to tribal-related issues, such as respect of fishing and other treaty rights.	None noted.
<b>P4: Community Relations &amp; Workers’ Rights</b>	FME places a high emphasis on staff training and other opportunities for advancement. A new mentorship program may help to ensure that more knowledge transfer to younger staff occurs prior to older staff’s retirement. Levels of cooperation between the various divisions of the DNR remain especially high; fisheries, wildlife and forest resources work collaboratively on a number of projects, from timber sale preparation to stream channel restoration.	OBS 2015.1
<b>P5: Benefits from the Forest</b>	FME’s timber and non-timber offerings support a number of industries and services, such as sawmills and tourism. FME has been using public trust fund to expand and enhance recreational opportunities throughout the state forest system.	None noted.
<b>P6: Environmental Impact</b>	FME has opted to keep water courses within the scope of the certificate, thus allowing chemical use within aquatic ecosystems to be subject to FSC requirements. Its annual chemical use summary includes locations and contact	OBS 2015.2, OBS 2015.3 and CAR 2015.4

	<p>information, which allows for greater transparency to stakeholders.</p> <p>FME is making efforts to maintain early and late successional habitat based on species composition, soils, and other site characteristics.</p>	
<b>P7: Management Plan</b>	None noted.	CAR 2015.5
<b>P8: Monitoring &amp; Assessment</b>	Significant updates to FME’s data and project management systems will allow different kinds of analysis of monitoring information in shorter timeframes.	OBS 2015.6
<b>P9: High Conservation Value Forests</b>	FME’s Ecological Reference Area classification process has attained broad support from stakeholders, including tribal representatives and environmental NGOs.	OBS 2015.7
<b>P10: Plantations</b>	NA	NA
<b>Chain of custody</b>	None noted.	None noted.

## 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**

<b>Finding Number: 2014.1</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): response is optional
<b>FSC Indicator:</b>	FSC-US indicators 9.1.b and 9.1.c
<b>Non-Conformity (or Background/ Justification in the case of Observations):</b> MDNR presented evidence of completing an analysis, expert and public consultation, and approval of an updated network of ERAs in response to CAR 2013.2. MDNR also conducted a preliminary analysis of roadless areas consistent with the definition of HCV3 per indicator 9.1.a in response to OBS 2013.5, which did not result in any new areas being identified for High Conservation Values (i.e., HCV3 overlaps with existing identified HCVs). However, MDNR did not conduct any stakeholder consultation activities per 9.1.b and 9.1.c specific to this newly identified HCV attribute.	

<p>To date, the expert and public consultation conducted by MDNR for ERAs has primarily focused been focused on HCV2 values inherent to the natural communities that provide the framework for MDNR-administered ERAs. The presence of other HCVs (including HCV3 roadless areas) for each ERA has not yet been fully vetted, and it would be inefficient to do a public consultation for a single HCV (Roadless Areas).</p>	
<p><b>Corrective Action Request (or Observation):</b>                  MDNR should develop a written plan of action to accomplish the following with respect to designated HCVs within ERAs:</p> <ol style="list-style-type: none"> <li>1. An assessment for high conservation values within MDNR’s network of ERAs as management plans for these areas are developed. The assessment should include consultation with qualified specialists, independent experts, and local community members who may have knowledge of areas that meet the definition of HCV 1, 2, 3, or 4 attributes.</li> <li>2. A summary of the assessment results and management strategies (see Criterion 9.3) to be included in the management plan summary that is made available to the public.</li> </ol>	
<p><b>FME response</b>                  (including any evidence submitted)</p>	<p>The DNR has developed and approved Information Circular 4198 – Ecological Reference Area (ERA) Planning Framework for ERAs on State Forest Lands, dated September 24, 2015. The planning framework contains an ERA Management Plan Template Outline that directs the inclusion of HCV attributes that have been identified through a rigorous assessment that includes consultation with qualified specialists (including MDNR and Michigan Natural Features Inventory staff), independent experts and local community members. A list of HCV attributes of regional (Great Lakes) importance is also included in the template. The ERA Business Framework directs that draft ERA management plans be posted for public review at the compartment review open house. The ERA Public Communications section of the planning framework also directs the posting of a summary of the assessment results and management strategies on the MDNR’s web pages.</p>
<p><b>SCS review</b></p>	<p>FME has fulfilled the observation to complete a written plan of action to complete its HCVF and RSA (see C6.4) classification under the ERA classification process as detailed in its response. Feedback received from stakeholders during the audit was overwhelmingly supportive of the FME’s process since it recognizes the needs for protection, management, and public involvement in ERAs.</p>
<p><b>Status of CAR:</b></p>	<p><input checked="" type="checkbox"/> Closed  <input type="checkbox"/> Upgraded to Major  <input type="checkbox"/> Other decision (refer to description above)</p>

<b>Finding Number: 2014.2</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): response is optional
<b>FSC Indicator:</b>	FSC-US indicator 9.2.b.
<b>Non-Conformity (or Background/ Justification in the case of Observations):</b> While the roadless HCV3 designation results in no new areas being classified as ERA (i.e., no fundamental change in total protected area and management options), a transparent and accessible public review of proposed roadless HCV3 attribute, its locations, and management was not carried out. Information from stakeholder consultations and other public review was not integrated into the roadless HCV3 description, delineation and management.	
<b>Corrective Action Request (or Observation):</b> On public forests, MDNR should prepare a written plan of action to accomplish the following: <ol style="list-style-type: none"> <li>1. A transparent and accessible public review of proposed HCV attributes and management to be utilized.</li> <li>2. Integration of information from stakeholder consultations and other public review into HCVF descriptions, delineations and management.</li> </ol>	
<b>FME response (including any evidence submitted)</b>	The DNR has developed and approved Information Circular 4198 – Ecological Reference Area (ERA) Planning Framework for ERAs on State Forest Lands, dated September 24, 2015. The planning framework contains an ERA Management Plan Template Outline that directs the inclusion of HCV attributes that have been identified through a rigorous assessment that includes consultation with qualified specialists (including MDNR and Michigan Natural Features Inventory staff), independent experts and local community members. A list of HCV attributes of regional (Great Lakes) importance is also included in the template. The ERA Business Framework directs that draft ERA management plans be posted for public review at the compartment review open house.
<b>SCS review</b>	FME has fulfilled the observation to complete a written plan of action to complete its HCVF and RSA (see C6.4) classification under the ERA classification process as detailed in its response. Public involvement is ensured as detailed in the ERA classification framework and legislative oversight.
<b>Status of CAR:</b>	<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

<b>Finding Number: 2014.3</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): response is optional
<b>FSC Indicator:</b>	FSC-US indicator 9.3.a.
<b>Non-Conformity (or Background/ Justification in the case of Observations):</b> 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.	
<b>Corrective Action Request (or Observation):</b> If any fundamental changes to the measures to maintain or enhance HCV values are identified during stakeholder consultation, the management plan and relevant operational plans should describe the measures necessary to ensure the maintenance and/or enhancement of the HCV attributes present in identified HCVF areas, including the precautions required to avoid risks or impacts to such values (see Principle 7).	
<b>FME response (including any evidence submitted)</b>	The DNR has developed and approved Information Circular 4198 – Ecological Reference Area (ERA) Planning Framework for ERAs on State Forest Lands, dated September 24, 2015. The planning framework contains an ERA Management Plan Template Outline that includes a threat assessment and management goals and objectives necessary to ensure the maintenance and/or enhancement of the HCV attributes present in identified HCVF areas.
<b>SCS review</b>	The ERA Planning Framework contains the threat assessment and management goals/ objectives as described. For ERAs identified so far, there has been little to no change in the management recommendations to maintain or enhance HCVs. Drafts reviewed include Granite Bedrock Glade and Pine Barrens Natural Community guidance, both of which contain elements of protection and active management to ensure that these ERAs are protected.
<b>Status of CAR:</b>	<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

#### 4.2.4 New Corrective Action Requests and Observations

<b>Finding Number: 2015.1</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): none
<b>FSC Indicator:</b>	FSC-US 4.4.a. (see also 8.2.d.3)
<p><b>Non-Conformity (or Background/ Justification in the case of Observations):</b> In 2006, FME had a socioeconomic report prepared at the state-level that covers the elements of indicator 4.4.a (Tessa Systems, LLC. 2006. Social and Economic Assessment for Michigan’s State Forests. A report prepared for the Michigan Department of Natural Resources, Forest, Mineral, and Fire Management Division, Lansing, Michigan. East Lansing, MI: Tessa Systems, LLC. 153 p.). Much of this report relies on data and other information collected from the years prior to 2006. Since that time, the State of Michigan has experienced an economic recession and recovery, as well as demographic changes.</p> <p>Moreover, the FME started an internal economic data group in 2014 that was disbanded as some of its membership retired. This group was collecting economic data on a number of issues that relate to protected and managed forests and impacted communities of Michigan. For example, much information was gathered on non-timber sources of income, such as oil, gas &amp; mineral development, leases, and recreation. FME participated in the governor’s forest products summit in 2013. A baseline economic assessment has been conducted for the state as a whole by a third party. This assessment functions as a basis for measuring progress toward achievement of goals established by the forest products summit.</p> <p>In terms of community economic opportunities, SCS received comments from a one timber sale buyer on the timing of release of bids and, via DNR timber sale data, confirmed that over the past six years that a large number of them occur between March and July. This may make bidding difficult for some purchasers as resources for check-cruising may be limited. Furthermore, some state forest areas have experienced a reduction in the number of small-scale sales due to failure to receive bids on them. How DNR assesses and considers factors such as the bidding process may have an impact on its understanding of community economic opportunities.</p> <p>FME has not defined the frequency of updating its socioeconomic assessment and what socioeconomic variables or research questions within the categories of indicator 4.4.a should be evaluated to complete the assessment.</p>	
<p><b>Corrective Action Request (or Observation):</b> FME should consider updating its assessment of 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"> <li>• Archeological sites and sites of cultural, historical and community significance (on and off the FMU);</li> <li>• Public resources, including air, water and food (hunting, fishing, collecting);</li> <li>• Aesthetics;</li> <li>• Community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health;</li> <li>• Community economic opportunities;</li> </ul>	

<ul style="list-style-type: none"> <li>Other people who may be affected by management operations. A summary should be made available to the CB.</li> </ul>	
<b>FME response</b> <i>(including any evidence submitted)</i>	<b>2015:</b> The DNR intends to develop a Request for Proposal for a new socioeconomic report, to be conducted in FY17. The DNR has also formed a work team to address the design of a bid offering system to ensure a more even flow of timber sale bid offerings throughout a year.
<b>SCS review</b>	<b>2015:</b> FME's response will be fully reviewed as a part of 2016's audit activities.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

<b>Finding Number: 2015.2</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<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):
<b>FSC Indicator:</b>	FSC-US 6.3.h
<b>Non-Conformity</b> (or Background/ Justification in the case of Observations): FME has made several advances in its overarching invasive species management program, particularly in aquatic ecosystems. The recent hire of a person tasked with organizing joint efforts in control between the forest resources and wildlife divisions within the DNR is also a positive development for maintaining long-term conformance to 6.3.h. According to interviews with FME staff located on state forests, implementation of management practices that minimize the risk of invasive species establishment on terrestrial ecosystems have been lacking or slow to launch.	
<b>Corrective Action Request</b> (or Observation): FME should assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control invasive species, including: <ol style="list-style-type: none"> <li>implementation of management practices that minimize the risk of invasive establishment, growth, and spread.</li> </ol>	
<b>FME response</b> <i>(including any evidence submitted)</i>	<b>2015:</b> DNR Fisheries Division established a policy in 2007 for decontamination on survey equipment for viral hemorrhagic septicemia, followed by procurement and deployment of decontamination equipment. A Quality of Life (QOL) group (DEQ/DNR/MDARD) policy (QOL-2-2014) was adopted on December 9, 2014, which provides specific invasive species decontamination methods for field operations. Wildlife Division disseminated additional guidance and checklists for both aquatic and terrestrial decontamination of equipment to their staff in June 2015. DNR Forest Resources Division is in the process of adapting and providing similar guidance to FRD staff. Training on invasive species control is on the agenda for FRD Professional Development Training in February 2016.  \$200,000 of QOL funds have been used for purchase of decontamination equipment for all QOL departments, initially focusing on aquatic invasive species control. QOL funds to purchase decontamination equipment for control of terrestrial invasive species is pending. The DNR has also applied for a USFS

	Landscape Scale restoration grant for purchase limited decontamination equipment for loggers, recreational trail users, etc. and to create a state-wide decontamination outreach campaign.
<b>SCS review</b>	<b>2015:</b> The finding was modified to specifically address the differences in implementation in aquatic versus terrestrial ecosystems. DNR's response will be reviewed at the 2016 audit.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

<b>Finding Number: 2015.3</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): none
<b>FSC Indicator:</b>	FSC-US 6.6.e
<b>Non-Conformity</b> (or Background/ Justification in the case of Observations): Work Instruction 2.2 includes a few pesticides (such as rotenone) that are authorized for use, but they do not appear in the "FY15 Annual Summary of Pesticide Use on State Forest Lands" report submitted by the organization. It is not clear if all Divisions, including Fisheries, are following the reporting instructions.	
<b>Corrective Action Request</b> (or Observation): FME should ensure that the work instructions related to the monitoring requirements of 6.6.e are understood and followed.	
<b>FME response</b> (including any evidence submitted)	<b>2015:</b> Communication has been made to Fisheries Division regarding the annual reporting requirements for chemical use. Use of rotenone has been added to an updated 2015 list of chemical use.
<b>SCS review</b>	<b>2015:</b> FME's full response will be reviewed at the 2016 audit.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

<b>Finding Number: 2015.4</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input checked="" type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	

<b>Deadline</b>	<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):
<b>FSC Indicator:</b>	FSC-US 6.7.a.
<b>Non-Conformity (or Background/ Justification in the case of Observations):</b> Not all of FME’s contractors have the equipment necessary to respond to hazardous spills. As observed on two active logging sites (Valleyview on Gaylord FMU and Spring Lake Jack Oak on Atlanta FMU), employees of contractors did not have access to spill kits or other containment and cleanup measures to respond to spills in a timely manner. This goes against the recommendation detailed in section 3 of the FME’s BMP manual that at least one spill kit should be available on the job site.	
<b>Corrective Action Request (or Observation):</b> FME employees and contractors shall have the equipment and training necessary to respond to hazardous spills.	
<b>FME response (including any evidence submitted)</b>	<p><b>2015:</b> Standard DNR Timber Sale Contract specification 5.3 requires conformance to Michigan Sustainable Soil and Water Quality Practices on Forest Land (Forestry BMPs – which directs the availability of a spill kit on every job site) and specification 5.6.1 requires immediate cleanup of any oil spills:</p> <p>5.3 - Stream Protection (3/11)                  In accordance with Parts 31, 91, 301, 303, and 305, 1994 PA 451, no equipment is to be operated over or through streams except on approved stream crossings. Operations shall be conducted to prevent debris from entering stream courses. Any fill placed in wetlands as a result of harvest operations must be removed. Purchaser is responsible for implementing all Best Management Practices (BMPs) as outlined in the DNR publication "Sustainable Soil and Water Quality Management Practices on Forest Land" even if not specifically mentioned in this contract. All roads, streams, and wetland crossings must conform to the BMPs.</p> <p>5.6.1 - Petroleum Products (2/04)                  Dumping of waste oil or hydraulic fluid resulting from on-site maintenance of equipment is illegal per PA 451 of 1994. Violations are subject to a fine of up to \$2,500. Any spill, accidental or intentional, must be cleaned up immediately and reported to the Unit Manager and the Environmental Response Division of the Department of Environmental Quality. All contaminated soil must be removed to a licensed disposal area. Cost of any clean-up is the sole responsibility of the contractor.</p> <p>BMP training is annually provided to producers through Sustainable Forestry Education (SFE) courses (Michigan SFI Logger Training) provided by the Michigan Forest Products Council and the DNR.</p> <p>Adequate DNR procedures are in effect to address the requirements of FSC-US 6.7.a., but in these observed incidences the producers were in non-compliance with contract specifications.</p> <p>An email will be sent to all DNR FRD unit managers to remind sale administrators</p>

	<p>to cover these contract requirements during pre-sale meetings with producers (as documented on the DNR FRD Timber Sale Contract – Field Inspection Report - R4050).</p> <p>The DNR is working with the SFI Implementation Committee - Sustainable Forestry Education (SFE) Subcommittee to update the SFE training course on Best Management Practices to include more information on the DNR contract requirement for producers to have a fuel/oil spill kit available on every contracted timber sale.</p>
<b>SCS review</b>	<b>2015:</b> FME’s completed response will be reviewed at the 2016 audit.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

<b>Finding Number: 2015.5</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input checked="" type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<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):
<b>FSC Indicator:</b>	FSC-US 7.1.p.
<b>Non-Conformity</b> (or Background/ Justification in the case of Observations): FME’s BMP manual describes cases where certain equipment types or features are recommended based on sensitive conditions (Sustainable Soil and Water Quality Practices on Forest Land; DEQ 2009). However, the management plan does not include a general description and justification of the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.	
<b>Corrective Action Request</b> (or Observation): The management plan shall describe and justify the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.	
<b>FME response</b> (including any evidence submitted)	<p><b>2015:</b> Current DNR guidelines and contract specifications effectively function to minimize and limit adverse impacts to forest resources during harvesting operations (see findings for FSC-US 5.3.b.).</p> <p>To provide more specificity regarding the requirements of Indicator 7.1.p. the DNR and DEQ will initiate an update of Forestry BMP guide (Sustainable Soil and Water Quality Practices on Forest Land, DNR and DEQ 2009). This update may not be completed by the date of the August 2016 surveillance audit.</p>
<b>SCS review</b>	<b>2015:</b> FME’s complete response will be reviewed at the 2016 audit.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

<b>Finding Number: 2015.6</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): none
<b>FSC Indicator:</b>	FSC-US 8.5.a
<b>Non-Conformity (or Background/ Justification in the case of Observations):</b> All non-confidential monitoring information is available upon request. FME provides all monitoring reports on its webpage: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331525--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331525--,00.html</a> . All topics of Criterion 8.2 are addressed, though some updates are missing. For example, under heading 4 it states that "Documentation is not yet available in a concise format." However, some of this information is available in the FME's Annual Accomplishment Reports. Additionally, all DNR divisions create annual reports; the annual reports for the Wildlife and Fisheries Divisions are not linked to this page.	
<b>Corrective Action Request (or Observation):</b> FME should consider updating its public summary of monitoring results to fill in any gaps that it identifies.	
<b>FME response (including any evidence submitted)</b>	<b>2015:</b> The DNR will review the monitoring reports web page for content and presentation, including the addition of the divisional annual reports.
<b>SCS review</b>	<b>2015:</b> FME's complete response will be reviewed at the 2016 audit.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision (refer to description above)

<b>Finding Number: 2015.7</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input type="checkbox"/> Minor CAR <input checked="" type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification <input type="checkbox"/> 3 months from Issuance of Final Report <input type="checkbox"/> Next audit (surveillance or re-evaluation) <input checked="" type="checkbox"/> Other deadline (specify): none
<b>FSC Indicator:</b>	FSC-US 9.1.b and 9.1.c
<b>Non-Conformity (or Background/ Justification in the case of Observations):</b> Management guidelines that document risks and appropriate options for the maintenance of HCV attributes and RSAs are currently complete for only a sub-set of the HCVs and none of these draft documents have been formally adopted.  However, FME's draft plan to complete its public consultation of Ecological Reference Areas (ERAs) is	

about to be implemented according to its established timeline.	
<b>Corrective Action Request (or Observation):</b> At the next audit, FME should provide to the certifier documentation of progress toward making available to the public a summary of assessment results and management strategies for HCVs (see Criterion 9.3) that have been developed in consultation with qualified specialists, independent experts, and local community members.	
<b>FME response</b> <i>(including any evidence submitted)</i>	<b>2015:</b> The DNR will execute the ERA planning framework for a selection of ERAs on 3 FMUs in 2016 for the purpose of testing the efficacy of the framework.
<b>SCS review</b>	<b>2015:</b> FME’s progress will be reviewed at the 2016 audit.
<b>Status of CAR:</b>	<input type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> <i>Other decision (refer to description above)</i>

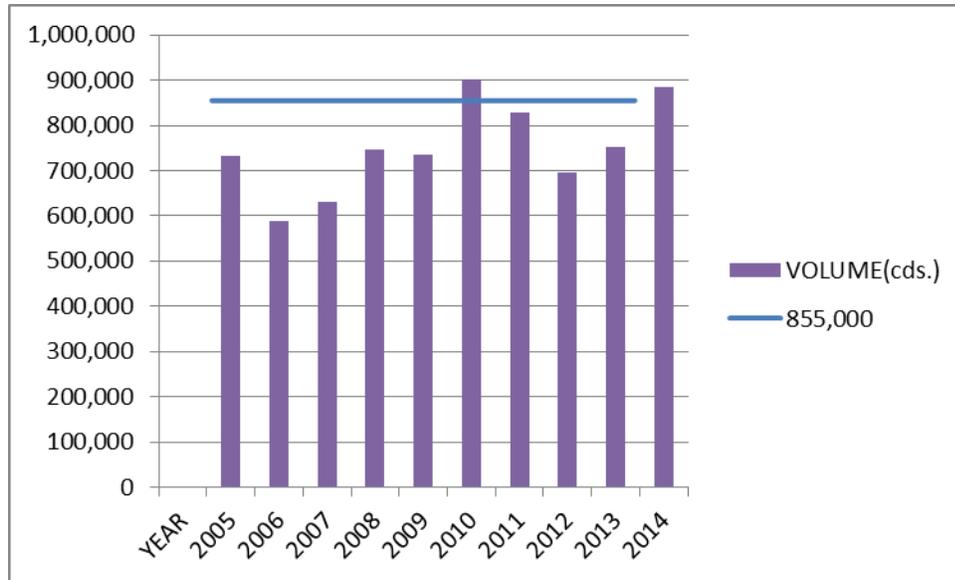
## 5. Certification Decision

Certification Recommendation	
<b>FME be awarded FSC certification as a “Well-Managed Forest” subject to the minor corrective action requests stated in Section 4.2.</b>	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"/>
<b>Comments:</b>	

## SECTION B – APPENDICES (CONFIDENTIAL)

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

#### MICHIGAN DNR FOREST RESOURCES DIVISION: TIMBER PRODUCTION ON STATE FOREST LAND



fiscal years 2005 - 2014

YEAR	ACRES		VOLUME(cds.)	
	Prp'ed*2	Hrv'ed*5	Prp'ed*6	Hrv'ed*9
2005	53,949	50,774	792,090	732,112
2006	52,058	39,922	815,399	587,211
2007	49,119	42,784	724,512	629,367
2008	54,736	49,352	864,414	746,732
2009	57,178	47,745	832,032	736,272
2010	53,157	58,476	800,604	901,721
2011	53,526	53,529	801,581	828,117
2012	56,609	45,444	773,407	696,860
2013	64,015	55,922	942,754	753,169
2014	62,021	59,628	993,608	885,143
				749,670
				855,000

cords averaged for the decade  
estimate of annual growth on state forest timberland\*10

\*2 Prp'ed Acs.: Queried from TSale database (Prepared Sales report). Based on proposal date.

\*5 Hrv'ed Acs.: From Cords and Acres report from the FMUs and is based on Payment Unit completion dates.

\*6 Prp'ed Cds.: Queried from TSale database (Prepared Sales report). Based on proposal date.  
 \*9 Hrv'ed Cds: From Cords and Acres report from the FMUs and is based on Payment Unit completion dates.  
 \*10 Estimate of annual growth on timberland: From an analysis done by D. Price and L. Dygert, 2015.

## 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
Lou Ann Fedewa, CPA	Program Services Section Manager	<a href="mailto:fedewal@michigan.gov">fedewal@michigan.gov</a>	Office
Doug Heym	Timber Sales Specialist	<a href="mailto:heymd@michigan.gov">heymd@michigan.gov</a>	Office
Sheryl Farhat	HR director	<a href="mailto:farhatc@michigan.gov">farhatc@michigan.gov</a>	Office
Matt Fry	Land use program manager, FRD	<a href="mailto:frym1@michigan.gov">frym1@michigan.gov</a>	Office
Fran Ryan	Training manager	<a href="mailto:ryanf@michigan.gov">ryanf@michigan.gov</a>	Office
Sharon Schafer	Chief of Finance and Operations Division	<a href="mailto:schafers@michigan.gov">schafers@michigan.gov</a>	Office



2\_2015 MI DNR  
 Audit Participation Pla

### List of other Stakeholders Consulted

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.
Brady Nash	Nash Forest Products	989-306-2728	Field	Y
Thomas Cole	Logger	231-846-1234	Field	N
Dick Haskin	Lutke Forest Products	231-824-6655	Field	N
Scott Brohkema	Roger Bazuin Forest Products	231-825-2889	Field	N

Several other stakeholders were interviewed remotely via email or phone. SCS maintains this information in its files for the 2015 recertification assessment.

## Appendix 4 – Additional Evaluation Techniques Employed

A significant portion of stakeholder consultation was conducted remotely via phone and email. Through communication with the onsite audit team, SCS was able to verify stakeholder comments received in this manner.

## Appendix 5 – Certification Standard Conformance Table

C= Conformance with Criterion or Indicator

NC= Nonconformance with Criterion or Indicator

NA= Not Applicable

### FSC Forest Management Standard (v1.0)—United States

REQUIREMENT	C/N C	COMMENT/CAR
<b>Principle #1: Compliance with Laws and FSC Principles</b> <b>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.</b>		
<b>1.1 Forest management shall respect all national and local laws and administrative requirements.</b>	C	
<b>1.1.a</b> Forest management plans and operations demonstrate compliance with all applicable federal, state, county, municipal, and tribal laws, and <b>administrative requirements</b> (e.g., regulations). Violations, outstanding complaints or investigations are provided to the <b>Certifying Body</b> (CB) during the annual audit.	C	<p>FME is granted the authority to manage state forestlands from the Michigan State Legislature. As described in the 2008 Forest Management Plan and amendments, the State of Michigan’s Natural Resources and Environmental Protection Act (NREPA; 1994) provides the regulatory framework within which the Michigan DNR, Forest Resource Division must operate. For example, NREPA includes parts that address Federal laws, such as endangered species protections and measures to conserve biodiversity. Each year FME provides the legislature with an annual report detailing its progress on complying with a number of laws and regulations (<a href="http://www.michigan.gov/dnr/0,4570,7-153-10366---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-10366---,00.html</a>).</p> <p>According to the 2014 BMP Audit Report and interviews with FME staff, there have been no known violations to administrative, environmental or labor requirements.</p>
<b>1.1.b</b> To facilitate legal compliance, the <b>forest owner</b> or <b>manager</b> ensures that employees and contractors, commensurate with their responsibilities, are duly informed about applicable laws and regulations.	C	<p>FME presented a compilation of laws and regulations related to the management of forests and other natural resources under its jurisdiction, and a copy of its draft FY2016 budget development worksheet that cites applicable laws and how to meet their intent through DNR policies and actions. Additionally, FME has a timber sale management program that in part was created to comply with legal requirements. These documents are available to employees. Timber sale and other contracts, such as vegetation management, reference legal requirements as confirmed through an examination of contracts shown during field visits.</p>
<b>1.2. All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.</b>	C	
<b>1.2.a</b> The forest owner or manager provides written	C	FME must make payments in lieu of taxes (PILT) to

<p>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.</p>		<p>counties. One is the swamp tax/ reversions on acres obtained by FME through tax reversion process. Swamp tax payments are paid by the state treasury, but funding comes from the state’s general fund. On DNR-purchased lands, PILT is paid at an ad valorem tax rate from state funds and DNR-restricted funds. There is a commercial forest tax that is paid from the DNR general fund for private land enrolled in a discounted tax program, which the DNR matches. FME’s Chief of Finance and Operations Division provided records of payments to counties of PILT, swamp tax, and commercial forest tax by county for FY2013-14.</p>
<p><b>1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.</b></p>	<p>C</p>	
<p><b>1.3.a.</b> Forest management plans and operations comply with relevant provisions of all applicable binding international agreements.</p>	<p>C</p>	<p>FME conducted an analysis of applicable international agreements and how they apply to the state’s forest management context:  <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301-145065--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301-145065--,00.html</a> and  <a href="http://www.michigan.gov/documents/Treatiesagreements-FSC-CAR1_165073_7.pdf">http://www.michigan.gov/documents/Treatiesagreements-FSC-CAR1_165073_7.pdf</a>.</p>
<p><b>1.4. Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.</b></p>	<p>C</p>	
<p><b>1.4.a.</b> Situations in which compliance with laws or regulations conflicts with compliance with FSC Principles, Criteria or Indicators are documented and referred to the CB.</p>	<p>C</p>	<p>FME’s forest certification coordinator is in charge of ensuring that any potential areas of conflict are identified and addressed. According to interviews, FME staff try to identify any conflicts with proposed legislation and certification requirements prior to it being passed.</p>
<p><b>1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.</b></p>	<p>C</p>	
<p><b>1.5.a.</b> The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the <i>Forest Management Unit</i> (FMU).</p>	<p>C</p>	<p>FME provided an update on encroachment resolution and has resolved several cases since the last evaluation (see C2.3). FME has several law enforcement officers on staff that patrol the FMU to detect any illegal or unauthorized activities, as observed in the field. FME staff mark a portion of property boundaries each year.</p> <p>Illegal harvesting is handled by the local state forest managers, with oversight and assistance provided by the Lansing Timber Sale Specialist and Law Enforcement Division. FME tracks non-timber trespasses in a DNR database, including reports and correspondence. Non-</p>

		timber trespass resolution is coordinated by the FRD trespass specialist. See Criteria 2.3.
<b>1.5.b.</b> If illegal or unauthorized activities occur, the forest owner or manager implements actions designed to curtail such activities and correct the situation to the extent possible for meeting all land management objectives with consideration of available resources.	C	According to law enforcement staff, fines and arrests have been made for violations such as theft or collecting resources without a proper license. Corrective actions taken by FME staff include installing gates and boulders to deter unauthorized access to boat launches, as observed in the field.
<b>1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.</b>	C	
<b>1.6.a.</b> 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.	C	FME maintains a publicly available webpage on its FSC certification and its commitment to certification requirements: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360---,00.html</a> . Additionally, a statement endorsed by the director of the Michigan DNR that explicitly addresses this indicator is found in an interoffice communication dated September 24, 2014. This document is available publicly upon request according to interviews with FME staff as it is subject to the <a href="#">Michigan Freedom of Information Act of 1976</a> .
<b>1.6.b.</b> If the certificate holder does not certify their entire holdings, then they document, in brief, the reasons for seeking partial certification referencing FSC-POL-20-002 (or subsequent policy revisions), the location of other managed forest units, the natural resources found on the holdings being excluded from certification, and the management activities planned for the holdings being excluded from certification.	C	FME provided information on forest holdings outside of the scope of the certificate that is included in part 1.3 of Section A of this report.
<b>1.6.c.</b> 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	FME is aware of this requirement and generally only reports small changes in acreage in preparation for each audit; no significant changes have occurred since the last audit.
<b>Principle #2: Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.</b>		
<b>2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.</b>	C	
<b>2.1.a</b> The forest owner or manager provides clear evidence of <b>long-term</b> rights to use and manage the FMU for the purposes described in the management plan.	C	FME’s forest management plan (FMP) includes a description of its ownership boundaries (see sections 1.5, 4.1.5, and Appendix E). The legal foundation for ownership and use rights is included in Parts 324 and 525, Sustainable Forestry on State Forestlands, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Section 52503 of the statute requires comprehensive management planning of state-managed lands. Regional FMPs are prepared for the three main

		<p>regions included in the FSC certificate and include descriptions of ownership and use rights held by FME and third parties in appendices. 324.501-504 provide the legal basis for DNR to own and manage the resources on state lands per the organizational structure detailed therein.</p> <p>FME demonstrated GIS shape files of state ownership and leases mapped at quarter-quarter section level, based on parcel data in the Real Estate Information System (REIS). Information includes type of ownership (mineral rights, surface rights, and fee) and acreage for each type, by quarter-quarter section. Associated attribute table includes: number of parcels, type of ownership, and acreage of ownership for each quarter-quarter section. For parcel-based information, other data sources are used to confirm ownership at higher resolutions.</p>
<p><b>2.1.b</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.</p>	<p>C</p>	<p>Regional FMPs are prepared for the three main regions included in the FSC certificate and include descriptions of ownership and use rights held by FME and third parties in appendices. Forest Cert Work Inst. 3.1 – Forest Operations and 6.2 and DNR Policy and Procedure 26.01-01 address acceptable public uses.</p>
<p><b>2.1.c</b> 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.</p>	<p>C</p>	<p>The statewide FMP and regional FMPs include ownership and use rights information in maps. GIS maps are prepared prior to implementing management activities and provided to FME staff and contractors, as confirmed via field observation.</p>
<p><b>2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.</b></p>	<p>C</p>	
<p><b>2.2.a</b> The forest owner or manager allows the exercise of <i>tenure</i> and <i>use rights</i> allowable by law or regulation.</p>	<p>C</p>	<p>FME allows public uses of state forests consistent with legal requirements (e.g., recreation, hunting), as confirmed in interviews with stakeholders and observation of such use rights in the field. The audit team also observed evidence of rights-of-way on the FMU.</p>
<p><b>2.2.b</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.</p>	<p>C</p>	<p>As the FME is a public agency, it maintains regular communications with different recreational user groups. Public involvement and consultation, as well as how to provide feedback, are described on the FME’s webpage: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505---,00.html</a>.</p>
<p><b>2.3. Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The</b></p>	<p>C</p>	

<p><b>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.</b></p>		
<p><b>2.3.a</b> 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.</p>	C	<p>In January 2015, FME provided SCS with an update on resolving trespass issue through a procedure approved in November 2014 (26.26-19- Non-Timber Trespass Resolution) that includes a description of the process followed to address cases of adverse possession and other forms of non-timber trespass. Legal protection of the FMU is also covered in FME’s work instructions (7.2), which are available to the public on the FME’s website (<a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331517--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331517--,00.html</a>).</p> <p>98 new trespass cases have been discovered this year through inquiries related to forest road use and maintenance, and unauthorized gating and signing of public land. This increase in discovery/documentation is likely due to recent staff training, according to interviews with FME staff.</p>
<p><b>2.3.b</b> The forest owner or manager documents any significant disputes over tenure and use rights.</p>	C	<p>Per its non-timber trespass resolution, FME documents all disputes over tenure and use rights. A summary of these was provided to the audit team during the opening meeting; 60 FRD cases resolved since 10/1/2014, 98 cases discovered since 10/1/2014, 378 FRD cases pending as of 8/28/15, and 710 total pending cases on all DNR-managed land).</p> <p>159 of 192 ERI cases have been resolved. Resolution of the remaining 33 ERI cases is in progress (17 of these cases are on FRD managed lands). These cases are awaiting final surveys, payment by the private landowner, or recording of deeds. These cases are awaiting payment by the private landowner, authorization from the USFWS or recording of deeds. FME continues to resolve trespasses as it becomes aware of them.</p>
<p><b>Principle #3: The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.</b></p>		
<p><b>3.1. Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.</b></p>	NA	
<p><b>3.1.a</b> Tribal forest management planning and implementation are carried out by authorized tribal representatives in accordance with tribal laws and</p>	NA	<p>FME does not manage any tribally-owned FMUs, as confirmed via a review of land ownership and management statutes.</p>

customs and relevant federal laws.		
<b>3.1.b</b> The manager of a tribal forest secures, in writing, informed consent regarding forest management activities from the tribe or individual forest owner prior to commencement of those activities.	NA	
<b>3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.</b>	C	
<b>3.2.a</b> 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	<p>Consultation with tribes is guided by DNR Forest Certification Work Instructions 9.1, 1.6, and 3.1, and the 2007 Inland Consent Decree for the 1836 Treaty.</p> <p>FME did not report any management activities that impacted the legal rights or other binding agreements with tribes to the FMU in 2015, which was confirmed via a review of harvest plans.</p> <p>Interviews with tribal representatives did not indicate any new legal or other binding agreements to the FMU. FME staff interviewed demonstrated knowledge of a recent agreement prepared in 2007 intended to streamline the implementation of treaty obligations with tribes.</p> <p>In 2015, only one tribal representative communicated any issues with FME’s forest management to SCS. Specifically, the representative has concerns about chipping, the width of riparian management zones, and size of clearcut openings. FME demonstrated records of communications with this representative that show that it is attempting to meet with them to review these issues onsite.</p>
<b>3.2.b</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	FME staff demonstrated records of archaeological site identification and protection training (HAL training) during the audit (10/30/2001) and in professional development training in 2006 and 2014. As confirmed via compartment reviews, which are provided to the tribes, no specific tribal resources were identified on the sites visited in 2015.
<b>3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.</b>	C	
<b>3.3.a.</b> The forest owner or manager invites consultation with tribal representatives in identifying sites of current or traditional cultural, archeological, ecological, economic or religious significance.	C	As a part of compartment and management plan reviews, the tribes are invited to provide comments on these and other sites, as confirmed via interviews with tribal members and FME staff. Most recently, tribes were provided the opportunity to comments on the FME’s ERA

		classification process for the state’s RSA and HCVF classification.
<b>3.3.b</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	Tribes that responded in 2015 stated that the FME protects tribal resources such as archaeological sites according to agreements established with the state. FME also implements measures to stock fish in waterways and restore stream crossings, both of which may benefit tribal fishing opportunities.
<b>3.4. Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.</b>	NA	
<b>3.4.a</b> The forest owner or manager identifies whether <i>traditional knowledge</i> in forest management is being used.	NA	According to interviews with FME staff and site members, no protected traditional knowledge is used in forest management. Any use of NTFPs is not commercial and employs management practices that are either in the public domain (e.g., maple sugaring) or otherwise do not constitute protected traditional knowledge (e.g., deer population management). SCS confirmed through observation of management practices that FME does not employ any protected traditional knowledge.
<b>3.4.b</b> When traditional knowledge is used, written protocols are jointly developed prior to such use and signed by local tribes or tribal members to protect and fairly compensate them for such use.	NA	
<b>3.4.c</b> The forest owner or manager respects the confidentiality of tribal traditional knowledge and assists in the protection of such knowledge.	NA	
<b>Principle #4: Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.</b>		
<b>4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.</b>	C	
<b>4.1.a</b> Employee compensation and hiring practices meet or exceed the prevailing <i>local</i> norms within the forestry industry.	C	All FME positions are reviewed by the DNR’s Human Resources Division to ensure that compensation is commensurate with experience and qualifications and competitive with similar positions available in the private sector, according to interviews with FME staff. According to interviews with FME staff, salaries are comparable to slightly lower than the private forestry sector, but benefits tend to be better and pay is more consistent over time.  FME is an equal opportunity employer and recruits to several universities that include minorities and women, according to interviews with HR manager. Potential hires must meet basic qualifications and experience regardless of gender, ethnicity or race. FME maintains statistics on gender, race, and ethnicity.
<b>4.1.b</b> Forest work is offered in ways that create high quality job opportunities for employees.	C	According to interviews, staff have opportunities for training, workshops, and interdisciplinary work that they

		<p>likely would not have in the private sector. FME presented its strategic plan, which includes objectives for advancement and ensuring that employees that are about to retire are able to mentor younger staff that will replace them. Evidence that this is occurring was observed in the Grand Traverse unit in that an interim planner position is being filled by a local forester that is being mentored by older staff.</p> <p>According to interviews with HR manager, there is a quality of life office in the state that provides opportunities for mentorship and other forms of skill transfer. This program is relatively new, but is being used more in anticipation of retirements.</p>
<p><b>4.1.c</b> Forest workers are provided with fair wages.</p>	<p>C</p>	<p>DNR Forest Certification Work Instruction 7.2 requires that contractors meet legal requirements for employment practices and worker safety; FME has incorporated language about these requirements into contracts. FME's employees are paid at least the state minimum wage and often receive salaries comparable to those in the private sector according to interviews with staff. FME contractors stated that the bidding process is fair and that they are paid higher than minimum wage.</p> <p>According to interviews with HR manager, many salaries and benefits are negotiated between the unions and the office of the state employer. Also, there is a salary range provided for every position based on the results of these negotiations.</p>
<p><b>4.1.d</b> Hiring practices and conditions of employment are non-discriminatory and follow applicable federal, state and local regulations.</p>	<p>C</p>	<p>Non-discrimination policies and practices are normally enforced through the Michigan Department of Civil Rights and the DNR's Human Resources Division. Employee manuals and posters of state/ federal laws &amp; regulations observed onsite ensure that workers are informed of non-discrimination policies and enforcement. According to interviews, employees can file grievances through the Department of Civil Rights.</p>
<p><b>4.1.e</b> 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>FME adheres to processes for seeking local applicants and service providers in its work instructions, and also the <a href="#">DTMB Administrative Guide</a>, which includes provisions for seeking local service providers. Interviews with staff and contractors reveal that most are from Michigan and near FME service areas in the Upper and Northern Lower Peninsulas.</p>
<p><b>4.1.f</b> 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>FME provided records of participation in state-wide SAF meetings and conferences 2014-15. For example, FME staff participate in local SAF, SFI IC, and SFE meetings. FME staff volunteer with the Greening of Detroit on tree</p>

		plantings and showing urban children natural forests in the Northern Lower Peninsula. The FME’s website has a lot of information about forests and forest management, such as project learning tree and “who would want to cut a tree?”
<b>4.1.g</b> The forest owner or manager participates in local economic development and/or civic activities, based on scale of operation and where such opportunities are available.	C	FME provided records of economic development meetings related to natural resources and recreation on state lands (e.g., Economic Impact Data Department Workgroup, 10 Oct 2014, 17 Oct 2014, etc.). FME is currently researching economic opportunities and indicators based on the natural resources and services under its jurisdiction, as confirmed through interviews and a review of the current information attained.
<b>4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.</b>	C	
<b>4.2.a</b> The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).	C	Through interviews with FME employees, SCS confirmed that trainings cover legal requirements for health and safety and that staff receive medical coverage in case of accidents that occur on-the-job.
<b>4.2.b</b> The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts or other written agreements include safety requirements.	C	Contracts examined for both timber harvests and timber marking contain line items that require contractors to adhere to applicable safety laws and regulations (ex., Blanket Purchase Order contract item 2.203; Purchase Order items 21 and 23; and State Forest Timber Sale Contract item 6).
<b>4.2.c</b> The forest owner or manager hires well-qualified service providers to safely implement the management plan.	C	All contractors are required to submit evidence of having proper qualifications and/or training to be able to bid on state contracts, as verified in contract language and interviews with contractors. FME sponsors safety training for loggers through the SFE program, as verified through records and interviews with contractors.
<b>4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labor Organization (ILO).</b>	C	
<b>4.3.a</b> Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.	C	Both Federal and State law protect workers’ rights to freely associate with other workers for collective bargaining and other forms of advocating for their own employment interests. According to interviews with employees and HR managers, many FME employees are unionized.
<b>4.3.b</b> The forest owner or manager has effective and culturally sensitive mechanisms to resolve disputes between workers and management.	C	According to interviews with FME staff, FME maintains effective mechanisms for resolving disputes between fellow employees and management. There are defined processes for dealing with supervisors and channels for reporting grievances to HR.

		<p>According to interview with HR manager, FME has processes and procedures in place to resolve issues that may arise between employees and management. HR manager is also responsible for implementing any union contracts.</p>
<p><b>4.4. 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.</b></p>	<p>C</p>	
<p><b>4.4.a</b> 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"> <li>• Archeological sites and sites of cultural, historical and community significance (on and off the FMU;</li> <li>• Public resources, including air, water and food (hunting, fishing, collecting);</li> <li>• Aesthetics;</li> <li>• Community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health;</li> <li>• Community economic opportunities;</li> <li>• Other people who may be affected by management operations.</li> </ul> <p>A summary is available to the CB.</p>	<p>C</p>	<p>See <b>OBS 2015.1</b>.</p>
<p><b>4.4.b</b> The forest owner or manager seeks and considers input in management planning from people who would likely be affected by management activities.</p>	<p>C</p>	<p>Compartment reviews are held a year or more prior to each harvest or major management activity (e.g., prescribed fire). FME also receives public input during Open Houses. All management plans are open to public review during the draft phase. Comments are often addressed at the local level as the comment is received, as verified in email records and interviews with FME staff.</p> <p>In FY15, FME’s forest resources division received 21 logged-letters, 19 legislative requests, and 589 e-mail requests for information. These requests for information are forwarded to appropriate staff and addressed as a part of routine work responsibilities. FRD also received and addressed 15 requests for information under the Freedom of Information Act (FOIA) in FY 15.</p> <p>Other social interactions include:</p> <ul style="list-style-type: none"> <li>• Compartment reviews for Year of Entry 2016 were held in each Forest Management Unit.</li> </ul>

		<ul style="list-style-type: none"> <li>• Over 85,000 followers on the DNR Facebook account.</li> <li>• Nearly 25,000 Twitter followers with over 7,500 tweets on the general DNR Twitter feed, and over 5,000 followers with more than 1,900 tweets for the Upper Peninsula-specific feed.</li> <li>• Issuance of 61 press releases.</li> <li>• Distribution of 19 prescribed fire notices.</li> <li>• Distribution of 5 private forestland outreach notices.</li> </ul> <p>Through GovDelivery the DNR provided email communication on the following subjects:</p> <ul style="list-style-type: none"> <li>• Assistance to Private Forestland Owners: 10,340 subscribers</li> <li>• Forest Health: 9,659 subscribers</li> <li>• Forest Planning: 9,243 subscribers</li> <li>• Local Input on State Forests: 8,761 subscribers</li> <li>• Prescribed Burn Notices: 10,003 subscribers</li> <li>• Statewide DNR News: 39,937 subscribers</li> <li>• Upper Peninsula DNR News: 22,513 subscribers</li> <li>• Urban and Community Forestry Programs: 8,262 subscribers</li> <li>• Wildfire Incident Updates: 12,036 subscribers</li> <li>• Forest Industry: 398 subscribers</li> </ul> <p>Thousands of routine inquiries, comments, complaints via email and telephone calls that are received and respond to by District Forest Managers and Unit Managers, but these interactions are not comprehensively documented.</p>
<p><b>4.4.c</b> 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>In 2011, FME developed unit-specific webpages for all divisions within the FMU so that interested public and adjacent landowners can access information and deliver comments to FME.</p> <p>The websites augment Open Houses and public service announcements in newspapers and on local radio stations. FME also may consult adjacent landowners and local interested parties, such as NGOs, while in the field completing planning processes. Many comments are addressed informally in the field. In the case of certain NGOs, such as the Conservation Resource Alliance, these organizations participate in some management activities and provide input prior to project implementation.</p>
<p><b>4.4.d</b> For <i>public forests</i>, consultation shall include the following components: 1. Clearly defined and accessible methods for public</p>	<p>C</p>	<p>The process for public participation is described within “Managing Michigan’s State Forest: Your Guide to Participation” and addresses all elements of this</p>

<p>participation are provided in both long and short-term planning processes, including harvest plans and operational plans;</p> <p>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;</p> <p>3. An accessible and affordable appeals process to planning decisions is available.</p> <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>indicator. Public is notified of compartment reviews and open house meetings. Pre-inventory meetings are also open meetings, but are not currently listed at the website. Data used in decision making is available. Decisions can be appealed. FOIA process is used to respond to information requests. Tribal information is not subject to FOIA.</p>
<p><b>4.5. Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.</b></p>	C	
<p><b>4.5.a</b> The forest owner or manager does not engage in negligent activities that cause damage to other people.</p>	C	<p>FME reported one case of timber trespass onto a private landowner’s property in 2013, according to interview with land use program manager. The state formally owned the land and was accidentally included in a timber sale as the land was in the process of being sold.</p>
<p><b>4.5.b</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>Natural Resource Commission meetings are open meetings with time on the agenda for public comment. Management holds meetings to resolve internal disputes informally. A written dispute resolution process has long existed. FME maintains a policy of responding to correspondence within 10 days.</p> <p>In the case of the timber trespass, FME has been in negotiation with the private property owner since 2013 and has offered double stumpage value and to replant, which the property owner rejected. FME offered to reimburse the landowner for the land purchase price, which was also rejected. FME is in litigation and is trying to force a settlement with this individual.</p>
<p><b>4.5.c</b> Fair compensation or reasonable mitigation is provided to local people, communities or adjacent landowners for substantiated damage or loss of income caused by the landowner or manager.</p>	C	<p>There has not yet been a settlement on the timber trespass case, but it is in process. No other cases were reported.</p>
<p><b>Principle #5: Forest management operations shall encourage the efficient use of the forest’s multiple products and services to ensure economic viability and a wide range of environmental and social benefits.</b></p>		
<p><b>5.1. Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of</b></p>	C	

<p><b>production, and ensuring the investments necessary to maintain the ecological productivity of the forest.</b></p>		
<p><b>5.1.a</b> The forest owner or manager is financially able to implement core management activities, including all those environmental, social and operating costs, required to meet this Standard, and investment and reinvestment in forest management.</p>	<p>C</p>	<p>FME presented the results of contracted timber sale bids for FY2015 that demonstrate that it has selected the lowest bid contractors for contracted timber sale preparation. FME also presented FY15 Timber Sale Revenue with FDF Analysis and Projection based on data up to 19 September 2015, which includes revenue data 2012-15. FME also presented revenue projections for 2009-2018 (with actual data for past years and estimated for current and future years). Both datasets show that FME is expecting revenue to increase primarily through timber sale revenues. Other funding sources fluctuate, but overall remain steady.</p> <p>The most recent socioeconomic analysis of the DNR's overall impacts was conducted in 2006. FME is in the process of updating socioeconomic information, which may include information pertinent to this indicator.</p> <p>SCS interviewed the program services section manager, who provided an overview of costs and revenues for the FME. Revenue sources include appropriations, timber sales, and recreational fees. The trend is that timber revenue has increased since 2009 and appropriations have stayed steady. Budget projections are based on revenues for the past three years so that estimations remain low. This allows the FME to avoid planning for expensive or unsustainable costs, such as too many hires. The sections manager demonstrated a copy of the 2015 appropriations bill, which includes a budget for all divisions within the DNR. This serves as guidance for controlling costs. Most funding for the FRD comes from timber revenue followed by smaller sources, such as recreational user fees. None of the divisions within the scope of the certificate are funded through tax monies; all funding comes from user fees, timber revenue, grants, and private donations.</p>
<p><b>5.1.b</b> Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.</p>	<p>C</p>	<p>According to interview with the section manager, there have been no recent short-term financial factors that have led to reductions in timber revenue and other funding sources. In 2012, the Duck Lake Fire led to a decrease in timber revenue, but the following years showed increases. So overall there was little impact on the FME's bottom line. Through a demonstration from the timber sales specialist, updates to FME's VMS system will allow for better tracking of sanitation-salvage timber sales to determine any effect on conformance to criterion</p>

		5.6 and short-term financial factors per this indicator.
<b>5.2. Forest management and marketing operations should encourage the optimal use and local processing of the forest’s diversity of products.</b>	C	
<b>5.2.a</b> 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	All logging contractors interviewed are from Michigan. All contractors listed on harvesting jobs are also local, as verified by their addresses included in contracts. Loggers stated that harvested products are sold to regional mills for processing into paper, lumber, veneer, and engineered products. Due to the low value of most material, there is no reason to doubt that forest products are processed locally. Other services, such as a contracted social impact analysis conducted in 2006, are also conducted by firms located in Michigan.
<b>5.2.b</b> The forest owner or manager takes measures to optimize the use of harvested forest products and explores product diversification where appropriate and consistent with management objectives.	C	According to an interview with the timber sales specialist, 80% of all harvested products are pulp-grade and 20% are saw-timber. These numbers have been consistent over time given the quality of stands and local milling capacities. FME has hired some new marketing and utilization specialists so that it can better understand what and how industries are using from the FMU. Estimated volumes are based on utilization standards that are reviewed during timber sale inspections, as verified in interview with timber sales specialist and review of inspection forms.
<b>5.2.c</b> On public lands where forest products are harvested and sold, some sales of forest products or contracts are scaled or structured to allow small business to bid competitively.	C	According to an interview with the timber sales specialist, FME is an equal opportunity bidder. All bidders must be 18 years of age or older and not work for the DNR. There are a wide variety of sales that range from five to several hundred acres. Seventy of six hundred sales in 2014 were 5-25 acres in size, which allows smaller businesses to bid competitively. Sometimes, FME may sell a small amount of trees to adjacent landowners in the case of storm damage and other salvage.
<b>5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.</b>	C	
<b>5.3.a</b> Management practices are employed to minimize the loss and/or waste of harvested forest products.	C	<ul style="list-style-type: none"> <li>• DNR timber sales are sold on a lump-sum basis, encouraging producers to maximize their yield and minimize waste.</li> <li>• DNR collects a performance bond before commencement of the harvest. The desire to have the bond returned is a strong incentive for producers to minimize waste/damage.</li> <li>• Timber sale contracts specify trees to be harvested and utilization standards.</li> <li>• Timber Sale Inspection Form R-4050 checks for</li> </ul>

		<p>waste/damage.</p> <ul style="list-style-type: none"> <li>• If producers have a market for biomass, DNR sells biomass residuals.</li> <li>• Producers commonly use mechanical processors that cut low stumps and maximize utilization.</li> </ul>
<p><b>5.3.b</b> Harvest practices are managed to protect residual trees and other forest resources, including:</p> <ul style="list-style-type: none"> <li>• soil compaction, <i>rutting</i> and erosion are minimized;</li> <li>• residual trees are not significantly damaged to the extent that health, growth, or values are noticeably affected;</li> <li>• damage to NTFPs is minimized during management activities; and</li> <li>• techniques and equipment that minimize impacts to vegetation, soil, and water are used whenever feasible.</li> </ul>	C	<ul style="list-style-type: none"> <li>• DNR timber sale contracts include requirements to comply with BMPs designed to minimize soil compaction, rutting and erosion.</li> <li>• During field visit interviews, DNR foresters expressed knowledge of BMP excessive rutting metrics.</li> <li>• Seasonal cutting restrictions are applied to harvests and other active management on wet sites.</li> <li>• As noted in 5.3.a, a performance bond is collected to ensure against site and residual tree damage. Auditors observed careful logging jobs with little residual tree damage (see field site description notes).</li> <li>• DNR relies heavily upon natural regeneration techniques, which are also likely to pose less risk of damaging NTFP such as medicinal plants, berries, mushrooms, etc.</li> <li>• Sale requirements specify water crossings, if needed, that minimize impacts.</li> <li>• Special sites and habitats are buffered in harvest operations.</li> </ul>
<p><b>5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.</b></p>	C	
<p><b>5.4.a</b> The forest owner or manager demonstrates knowledge of their operation’s effect on the local economy as it relates to existing and potential markets for a wide variety of timber and non-timber forest products and services.</p>	C	<p>The Governor's 2013 Forest Products Summit was developed to bring together representatives from industry, government, the financial sector and academia to stimulate conversations and come up with ideas and opportunities for growing the state's forest products industry (A baseline economic assessment being conducted for the state as a whole by a third party is due 2016). FME has since worked with the governor-appointed Timber Advisory Council to establish five-year goals to help drive discussions and move post-summit plans forward. Those goals include:</p> <ul style="list-style-type: none"> <li>• Increasing the economic impact of the forest products industry from \$14 billion to \$20 billion. (According to DNR, the forest products industry contributed \$16.3 billion to the state economy in 2014 and provided more than 77,000 forest products sector jobs.)</li> <li>• Increasing the export of value-added forest products by 50 percent.</li> </ul>

		<ul style="list-style-type: none"> <li>Increasing forest products-related careers by 10 percent.</li> <li>Encouraging regionally based industry development.</li> </ul> <p>Forests have a major effect on year-round tourism as found in a 2014 <a href="#">Tourism Economics study</a>. Michigan hosted 113.4 million visitors in 2014 that generated \$37.8 billion in total business sales, supporting 326,685 jobs, and adding up to \$10.6 billion in income for Michigan tourism employees. Without tourism employment, the study estimates Michigan's 7.3 percent unemployment rate in 2014 would have been 13.3 percent.</p> <p>The socioeconomic impacts report (2006) also covers much of this information. Recently, the FME disbanded its economic analysis group due to retirements, but it did compile information on the impacts of timber harvest, recreation, mining, and other natural resources sectors on the state's economy.</p>
<p><b>5.4.b</b> The forest owner or manager strives to diversify the economic use of the forest according to Indicator 5.4.a.</p>	<p>C</p>	<ul style="list-style-type: none"> <li>DNR expects to sell about \$37 million in timber in 2015, according to harvest and financial projections. This benefits paper and primary wood products manufacturing, furniture and related secondary product manufacturing, wood energy, and other businesses.</li> <li>DNR offers a range of timber sale sizes for different types of producers (see C5.2)</li> <li>Elk management on the Atlanta State Forest draws thousands of visitors according to interviews with stakeholders</li> <li>DNR issues special use permits for various recreational user groups, as observed in records.</li> <li>DNR provides opportunities for ORV use on State Forests, which generates a lot of tourism.</li> <li>Hunting and fishing license sales and providing land for those activities generate significant revenue for the organization and private enterprises.</li> <li>DNR posts <a href="#">maps of past prescribed burns</a> on the Internet as potential morel mushroom gathering sites.</li> </ul>
<p><b>5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.</b></p>	<p>C</p>	
<p><b>5.5.a</b> In developing and implementing activities on the FMU, the forest owner or manager identifies, defines and implements appropriate measures for maintaining and/or</p>	<p>C</p>	<p>FME maintains a sophisticated system of management policies, work instructions and practices aimed at assuring that the full range of forest services, resources</p>

<p>enhancing forest services and resources that serve public values, including municipal watersheds, fisheries, carbon storage and sequestration, recreation and tourism.</p>		<p>and public values are considered prior to implementing site disturbing activities. Through cooperation between the fisheries, forest resource, and wildlife divisions, FME ensures that ecological services, hunting, fishing, and recreation are taken into account during all timber sale planning. FME also implements stream channel and crossing repairs to benefit fisheries and reduce the risk of negative flooding impacts. FME is making a more concerted effort to research climate change adaptation strategies to meet multiple management objectives, such as those related to water quality and forest health.</p>
<p><b>5.5.b</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.</p>	<p>C</p>	<p>See 5.5.a.</p> <p>While it is not possible that management of a very large public forest operation such as the FME can take place without some level of concern or discontent being voiced by one stakeholder group or another, it is the audit team’s ongoing conclusion that its policies and practices are demonstrably responsive to stakeholder input. For example, favorable responses from tribal representatives on fisheries and stream management-related issues were received.</p>
<p><b>5.6. The rate of harvest of forest products shall not exceed levels which can be permanently sustained.</b></p>	<p>C</p>	
<p><b>5.6.a</b> In FMUs where products are being harvested, the landowner or manager calculates the sustained yield harvest level for each sustained yield planning unit, and provides clear rationale for determining the size and layout of the planning unit. The sustained yield harvest level calculation is documented in the Management Plan.</p> <p>The sustained yield harvest level calculation for each planning unit is based on:</p> <ul style="list-style-type: none"> <li>• documented growth rates for particular sites, and/or acreage of forest types, age-classes and species distributions;</li> <li>• mortality and decay and other factors that affect net growth;</li> <li>• areas reserved from harvest or subject to harvest restrictions to meet other management goals;</li> <li>• silvicultural practices that will be employed on the FMU;</li> <li>• management objectives and desired future conditions.</li> </ul> <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</p>	<p>C</p>	<p>59,628 acres were harvested in FY14 with an estimated volume of 885,143 cords. The most recent maximum sustained yield estimate for state forest timber production is based upon a calculation of approximate current state forest annual net growth from lands that are suitable for timber production, which is about 855,600 cords. See file “MI DNR State Forest Growth and Yield - Working Version 9-18-2015.xls” for detailed calculations that address the requirements of this indicator.</p> <p>Extensive out of Year-of-Entry (YOE) salvage harvests of Emerald Ash Borer and Beech Bark Disease affected stands continued this year in the northern lower peninsula and eastern upper peninsula regions, which contributed to the higher volume in FY14. Corresponding updates of the forest inventory will account for these out-of-YOE salvage harvests in future annual work plans. See Appendix 1 of this report for a summary of harvests 2005-14.</p> <p>FME recently created MiFi (Michigan Forest Inventory) to track its forest inventory, which is a web-based GIS system that replaces IFMAP. TSALE is used to prepare</p>

<p>treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.</p>		<p>and track timber sales, but is gradually being replaced with other programs such as VMS. Overall, FME is in a process of updating older software tools with newer, more accessible ones to facilitate timber sale preparation and harvest. VMS and MiFi will be integrated at some point in 2016.</p> <p>MiFi includes the following variables for each stand: cover type, acreage, BA range, planted/natural, structure, age, age source, canopy, sub-canopy, DBH, size class, treatment lineage, etc.</p>
<p><b>5.6.b</b> Average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level.</p>	C	<p>Annual harvest level data provided by the organization indicate compliance (see following charts). 10-year average harvest = 749,670 cords. Estimated annual growth = 855,600 cords. See Appendix 1 of this report for a summary of harvests 2005-14.</p>
<p><b>5.6.c</b> Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across the FMU. Overstocked stands and stands that have been depleted or rendered to be below productive potential due to natural events, past management, or lack of management, are returned to desired stocking levels and composition at the earliest practicable time as justified in management objectives.</p>	C	<p>MI DNR has designed the YOE stand selection and harvest prescription process to achieve identified desired conditions. The forest inventory data and forest management treatments that are agreed upon are reflected in each Compartment's information packet. The compartment information packet includes:</p> <ol style="list-style-type: none"> <li>1. A Compartment Narrative</li> <li>2. Compartment Reports, including: <ul style="list-style-type: none"> <li>• Cover Type Summary</li> <li>• Treatment Summary</li> <li>• Stands Detail Report</li> <li>• Treatment Detail Report</li> <li>• Site Conditions Detail Report</li> <li>• Proposed and Dedicated Special Conservation Area details</li> </ul> </li> <li>3. Compartment maps showing stands, treatments and site conditions</li> </ol> <p>Any changes to treatments that are agreed to at the 15 Forest Management Unit <a href="#">Compartment Review meetings</a> are noted in the Forest Management Unit Compartment Record of Changes &amp; Decisions document.</p> <p>Numerous stands visited during the 2015 site audits involved efforts aimed at recovery from pest outbreaks, blowdowns and other events. See site notes. Updates of the forest inventory will account for these out-of-YOE salvage harvests in future annual work plans.</p>
<p><b>5.6.d</b> For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial</p>	C	<p>Michigan DNR staff indicate that NTFPs are not being commercially managed or made available for commercial harvesting. In the past, there have been incidental</p>

<p>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>permits for lycopodium harvests and mushroom gathering. The public is able to gather berries, fruits, nuts, mushrooms and wildflowers/medicinal plants (except ginseng and other plants protected by law) for personal use without a permit. The 2007 <a href="#">Inland Consent Decree</a> between the State of Michigan and five Chippewa tribes affirms treaty-guaranteed access to hunt, fish, and gather on State and some private lands. These gathering activities are not, however, at a commercial scale.</p> <p>The <a href="#">Michigan Ginseng Act</a> was passed in 1994 to regulate the harvest, sale, and distribution of American Ginseng in Michigan. This act covers both cultivated and wild ginseng, and makes it unlawful to take American ginseng from the wild without a permit. 2015 interviews with DNR staff indicate that no ginseng permits were issued on State Forest land.</p>
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**Principle #6: Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.**

<p><b>6.1. Assessments of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.</b></p>	<p>C</p>	
<p><b>6.1.a</b> Using the results of <i>credible scientific analysis, best available information</i> (including relevant databases), and local knowledge and experience, an assessment of conditions on the FMU is completed and includes:          1) Forest community types and development, size class and/or successional stages, and associated <i>natural disturbance regimes</i>;          2) <i>Rare, Threatened and Endangered (RTE) species</i> and <i>rare ecological communities</i> (including plant communities);          3) Other habitats and species of management concern;          4) Water resources and associated riparian habitats and hydrologic functions;          5) <i>Soil resources</i>; and          6) <i>Historic conditions</i> 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>	<p>C</p>	<p>Assessments are guided by a Procedure Checklist, State Forest Land Resource Assessment Activities:          1) MiFi (see C5.6) is based on forest community types and successional stages. Natural disturbance regimes are clearly reflected in management in all state forests visited during the audit, where natural and anthropogenic fire has been an important driver of landscape conditions throughout history. Considerations of natural disturbance patterns also are key elements of Management Area planning and RSFMPs.          2-5) RTE elements, habitats or other species of concern, water resources, and soils are all part of the MiFi, TSale and VMS systems and are mapped and discussed in pre-harvest compartment reviews, which involve personnel from various disciplines (e.g., wildlife, fisheries, forestry).          6) A review of historical conditions is included in the SFMP, and more explicit information on historic conditions are addressed in regional FMPs.</p>
<p><b>6.1.b</b> Prior to commencing site-disturbing activities, the</p>	<p>C</p>	<p>The assessments described in 6.1.a take place routinely</p>

<p>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 <b>best available information</b>, drawing from scientific literature and experts. The impact assessment will at minimum include identifying resources that may be impacted by management (e.g., streams, habitats of management concern, soil nutrients). Additional detail (i.e., detailed description or quantification of impacts) will vary depending on the uniqueness of the resource, potential risks, and steps that will be taken to avoid and minimize risks.</p>		<p>as part of the pre-prescription review at the compartment level, a process that involves experts from a variety of disciplines within the FME: forest management, wildlife habitat, T&amp;E specialists, fisheries, soil and water, cultural and historical. A sophisticated spatial database provides abundant information that supports the inter-disciplinary compartment reviews.</p>
<p><b>6.1.c</b> 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.</p>	C	<p>The explicit objective of the compartment reviews is to avoid undue impacts on the environment and on the interests of affected stakeholders. Long-term ecological viability of the forest is being addressed in many ways, currently converging in Management Area planning and RSFMPs. Timber harvest prescriptions include measures to avoid or minimize negative impacts, such as through mapping of water courses and excluding them from harvest in the field. Timber harvest prescriptions also address retention and regeneration objectives guided by timber, wildlife, and fisheries management. Timber sales may also include related projects such as bridge or culvert replacements, which is better for fisheries in the long-run.</p>
<p><b>6.1.d</b> 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.</p>	C	<p>Many management-planning processes involve representatives from the public participating on planning teams. All plans are made available for public comment when they are in Final Draft form and again at the end of the approval process. Less formal assessments are presented at open houses, as part of the compartment review process, once per year in each management unit.</p>
<p><b>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.</b></p>	C	
<p><b>6.2.a</b> 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</p>	C	<p>There have been no surveys for RTE species in FY15. An updated network of Ecological Reference Areas (ERAs) and Dedicated Habitat Areas was completed in FY15. Some new areas were provided to the Archeological Concerns Database in FY15. Some Type 1 and Type Old</p>

<p>present.</p> <p>Surveys are conducted by biologists with the appropriate expertise in the species of interest and with appropriate qualifications to conduct the surveys. If a species is determined to be present, its location should be reported to the manager of the appropriate database.</p>		<p>Growth Special Conservation Areas (SCAs) were preliminarily verified in FY 15 field inventory.</p>
<p><b>6.2.b</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. <b>Conservation zones</b> and/or <b>protected areas</b> 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>Management activities include: timber sales, prescribed burns, mowing, and non-commercial and commercial site preparation and tree plantings. The extent of these activities is not routinely tracked, and would require a specific GIS analysis.</p> <p>Measures taken to protect any RTE species, habitats and/or plant communities is evaluated on a case by case basis during the Compartment inventory process using SCA and HCVA layers in the GDSE and the Rare Species guidelines. Data bases for RTE species are routinely checked for ROW maintenance requests, use permits, event permits, burn plans, etc., and special management requirements are provided when known species are identified for an area.</p>
<p><b>6.2.c</b> 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>FME’s recovery efforts observed during the 2015 audit include large, landscape-level Jack pine (<i>Pinus banksiana</i>) zones managed for Kirtland’s Warbler habitat. Large snags and declining trees are maintained for raptors and other species that depend on structure or woody debris during parts of their lifecycles, as observed on other sites visited in 2015. Recently, FME is actively participating with other stakeholders in the preparation and implementation of measures to protect the eastern massasauga rattlesnake, and the northern long-eared bat species, populations of which have been on decline due to invasive fungi.</p>
<p><b>6.2.d</b> 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>Measures taken to protect any RTE species, habitats and/or plant communities is evaluated on a case by case basis during the Compartment inventory process using SCA, ERA, and HCVA layers in the GDSE and Rare Species guidelines. Data bases for RTE species are routinely checked for ROW maintenance requests, use permits, event permits, burn plans, etc., and special management requirements are provided when known species are identified for an area.</p> <p>The DNR conducts an annual harvest of state threatened lake sturgeon on Black Lake and Otsego Lake, where the state forest has a limited riparian interest. This is a controlled harvest (with strict harvest limits and reporting</p>

		requirements) of a threatened species where they are threatened on a statewide scale, but secure and locally abundant in these localized areas. No other hunting activities were authorized that impact any RTE species.
<b>6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.</b>	C	
<b>6.3.a.1</b> The forest owner or manager maintains, enhances, and/or restores under-represented <b>successional</b> stages in the FMU that would naturally occur on the types of sites found on the FMU. Where old growth of different community types that would naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance and/or restore old growth characteristics.	C	<ul style="list-style-type: none"> <li>Michigan DNR’s YOE stand selection and harvest prescription process is designed to maintain and enhance desired age-class distributions on State Forests. Successional (age-class) distribution data are available in the forest inventory by species. The only problem species identified in USFS inventory studies are ash and beech, which are being impacted by invasive pests (<a href="#">Forests of Michigan, 2013</a>, USDA Forest Service).</li> <li>Retention practices observed during harvests assure that a percentage of older trees representative of the stand are not cut. Area retention in timber harvests are tracked with site condition coding in the forest inventory.</li> <li>FME has conducted an analysis to update the network of Ecological Reference Areas on the FMU and some non-FME ownerships to include common natural communities, and has updated a network of Dedicated Habitat Areas on the FMU to provide habitat for species that required interior core forest.</li> </ul>
<b>6.3.a.2</b> When a <b>rare ecological community</b> 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, <b>conservation zones</b> and/or <b>protected areas</b> are established where warranted.	C	All documented rare ecological communities have been included in the updated FME’s network of Ecological Reference Areas. Work Instruction 1.4 provides guidance for land managers that conform to the intent of this indicator. Many rare ecological communities are wetlands or areas near wetlands that are rarely entered for harvests. If entered, areas within the unit are delineated for rare plant protection. Rare communities are normally detected during harvest planning and measures are devised to protect them or modify management practices to maintain or enhance them.
<b>6.3.a.3</b> When they are present, management maintains the area, structure, composition, and processes of all <b>Type 1</b> and <b>Type 2 old growth</b> . 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.	C	No harvests occur in old growth designations. Treatment of stands adjacent to OG stands are evaluated on a case by case basis during the compartment review process. See Work Instruction: 1.4 “Biodiversity Management on State Forest Lands” for details, which is consistent with the requirements of this indicator.

<p>Type 1 Old Growth is protected from harvesting and road construction. Type 1 old growth is also protected from other timber management activities, except as needed to maintain the ecological values associated with the stand, including old growth attributes (e.g., remove exotic species, conduct controlled burning, and thinning from below in dry forest types when and where restoration is appropriate).</p> <p>Type 2 Old Growth is protected from harvesting to the extent necessary to maintain the area, structures, and functions of the stand. Timber harvest in Type 2 old growth must maintain old growth structures, functions, and components including individual trees that function as refugia (see Indicator 6.3.g).</p> <p>On public lands, old growth is protected from harvesting, as well as from other timber management activities, except if needed to maintain the values associated with the stand (e.g., remove exotic species, conduct controlled burning, and thinning from below in forest types when and where restoration is appropriate).</p> <p>On American Indian lands, timber harvest may be permitted in Type 1 and Type 2 old growth in recognition of their sovereignty and unique ownership. Timber harvest is permitted in situations where:</p> <ol style="list-style-type: none"> <li>1. Old growth forests comprise a significant portion of the tribal ownership.</li> <li>2. A history of forest stewardship by the tribe exists.</li> <li>3. High Conservation Value Forest attributes are maintained.</li> <li>4. Old-growth structures are maintained.</li> <li>5. Conservation zones representative of old growth stands are established.</li> <li>6. Landscape level considerations are addressed.</li> <li>7. Rare species are protected.</li> </ol>		
<p><b>6.3.b</b> To the extent feasible within the size of the ownership, particularly on larger ownerships (generally tens of thousands or more acres), management maintains, enhances, or restores habitat conditions suitable for well-distributed populations of animal species that are characteristic of forest ecosystems within the landscape.</p>	<p>C</p>	<p>Michigan State Forests are co-managed by the Divisions of Forestry and Wildlife. Wildlife managers review all stand prescriptions as part of the annual YOE process. Numerous field sites during the 2015 audit exhibited strong collaborative work between foresters and wildlife biologists (see site visit notes).</p> <p>The <a href="#">Wildlife Habitat Grant Program</a> (WHGP) purpose is to provide funding to local, state, federal and tribal units of government, profit or non-profit groups, and individuals</p>

		<p>to assist the Wildlife Division with developing or improving wildlife habitat for game species.</p> <p>Most commercial harvest prescriptions benefit wildlife habitat. Many non-commercial treatments such as mowing, burning, and planting of mast species and under-represented conifer species are done for wildlife habitat purposes. There have been 135 prescribed fires on 9,259 acres on state forest lands for purposes of fuel reduction, site preparation, habitat restoration, and invasive species control in 2015 (as of 9/14/ 2015). The WLD Annual Report for FY 2014 provides additional detail on wildlife habitat work.</p>
<p><b>6.3.c</b> Management maintains, enhances and/or restores the plant and wildlife habitat of <b>Riparian Management Zones (RMZs)</b> to provide:</p> <ul style="list-style-type: none"> <li>a) habitat for aquatic species that breed in surrounding uplands;</li> <li>b) habitat for predominantly terrestrial species that breed in adjacent <b>aquatic habitats</b>;</li> <li>c) habitat for species that use riparian areas for feeding, cover, and travel;</li> <li>d) habitat for plant species associated with riparian areas; and,</li> <li>e) stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem.</li> </ul>	<p>C</p>	<p>Riparian Management Zone management is addressed in each Michigan Regional State Forest Management Plan. State BMPs are followed for all management activities near riparian areas. Buffer zones are established and treatments either excluded or modified to protect water quality. When required, stream crossing permits and stream restoration projects are obtained from the MI DEQ. In 2015, interviews with forestry and fisheries staff indicate that the minimum buffer of 100 ft. for perennial water courses may be extended to protect stream shading and water infiltration depending on slope or presence of native fish. Examples of riparian zone protection and stream channel restoration were noted during field inspections (see 2015 field site notes).</p>
<p><b>Stand-scale Indicators</b></p> <p><b>6.3.d</b> 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>The desired future conditions prescribed for each stand reflect the maintenance objective, and the 10-year stand exam approach enables actions toward the goal. Staff use ecological classification system to identify native plant community options each stand. This information is used to guide the desired plant species composition for the site.</p> <p>During 2015 site visits, auditors observed management in a wide variety of cover types. Levels of retention were consistent with maintaining larger individuals and seed sources on sites where even-aged harvests occurred. In selection harvests, all species were retained to varying degrees. Tracking of area retention within and outside of harvest units is accomplished by coding in the web-based GIS inventory system, MiFI. DNR staff provided a MiFI demonstration.</p>
<p><b>6.3.e</b> 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</p>	<p>C</p>	<p>All seed used at the DNR nursery originates from Michigan. Purchased red pine seedlings originate from Ontario. Wildlife Division under-plantings of oak and mesic conifers are sourced from Michigan or the Great</p>

<p>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. <b>Native species</b> suited to the site are normally selected for regeneration.</p>		<p>Lakes region. Plantings of Beech Bark Disease resistant beech originate from cuttings in Michigan.</p> <p>Interviews with staff during 2015 site visits indicate that data on seedling provenance, planting crews, weather conditions, etc. is maintained for each planting project to enable better success monitoring.</p>
<p><b>6.3.f</b> Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include:</p> <ul style="list-style-type: none"> <li>a) large live trees, live trees with decay or declining health, <b>snags</b>, and well-distributed coarse down and dead woody material. <b>Legacy trees</b> where present are not harvested; and</li> <li>b) vertical and horizontal complexity.</li> </ul> <p>Trees selected for <b>retention</b> are generally representative of the dominant species found on the site.</p>	<p>C</p>	<p>Michigan DNR Forest Certification Work Instructions dated June 23, 2015 provide specific guidance for compliance with retention requirements in this indicator. Planned within stand retention is tracked using the MiFI system. In 2015, auditors observed conformant retention on all harvest sites. See 2015 field site notes.</p>
<p><b>6.3.g.1</b> In the Southeast, Appalachia, Ozark-Ouachita, Mississippi Alluvial Valley, and Pacific Coast Regions, when <b>even-aged systems</b> 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>29,544 acres of even-aged harvests occurred in fiscal year 2013-14. There were no identified issues regarding within-stand retention in stands sampled for 2015 field sites (see site notes). Interviewed wildlife staff expressed satisfaction with retention strategies employed within harvest units.</p>
<p><b>6.3.g.2</b> 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> <ul style="list-style-type: none"> <li>1. Is developed by qualified experts in ecological and/or related fields (wildlife biology, hydrology, landscape ecology, forestry/silviculture).</li> <li>2. Is based on the totality of the <b>best available information</b> including peer-reviewed science regarding natural disturbance regimes for the FMU.</li> <li>3. Is spatially and temporally explicit and includes maps of proposed openings or areas.</li> <li>4. Demonstrates that the variations will result in equal or greater benefit to wildlife, water quality, and</li> </ul>	<p>C</p>	<p>There are no limitations on even-aged management in the Lake States.</p> <p>During 2015 site visits, a few large harvests of 300-600 acres were observed in Kirtland’s Warbler habitat management blocks. Large block harvests are approved and necessary as part of the species habitat conservation plan.</p>

<p>other values compared to the normal opening size limits, including for sensitive and rare species.</p> <p>5. Is reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings.</p>		
<p><b>6.3.h</b> The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control <i>invasive species</i>, including:</p> <ol style="list-style-type: none"> <li>1. a method to determine the extent of invasive species and the degree of threat to native species and ecosystems;</li> <li>2. implementation of management practices that minimize the risk of invasive establishment, growth, and spread;</li> <li>3. eradication or control of established invasive populations when feasible: and,</li> <li>4. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species.</li> </ol>	<p>NC</p>	<p>FME reported the following highlights during 2015:</p> <ul style="list-style-type: none"> <li>• PRD staff conducted visual Asian Longhorned Beetle inspections in State Parks and Recreation Areas. They also looked for Oak Wilt, Hemlock Woolly Adelgid, Thousand Cankers Disease, and other invasive species. Forest Health Program staff provided the training to inspectors at the beginning of the season and technical support throughout the survey period.</li> <li>• Implemented department decontamination policy with all division staff by providing training, support and equipment.</li> <li>• Worked with several Cooperative Invasive Species Management Areas (CISMAs) to control high priority invasive plants on over 1,600 acres in the Northern Lower Peninsula and Upper Peninsula on public and private lands. Priority species include phragmites, garlic mustard, Siberian crabapple, autumn olive, wild parsnip, swallow-wort and European frog-bit, butterbur, barberry, and buckthorn.</li> <li>• Provided funding through the Michigan Invasive Species Grant Program (MISGP) to create 2 new CISMAs in the Northern Lower Peninsula. This completes coverage of all state forest land with CISMAs in Michigan.</li> <li>• Provided training to over 100 loggers for Sustainable Forestry Education on invasive species identification and prevention in partnership with the Sustainable Forest Initiative.</li> <li>• Partnered with USDA Wildlife Services to control mute swan populations on public and private lands. Mute swan populations are lower than 9,000, down from over 15,000 a few years prior.</li> <li>• Partnered with Michigan State University and USDA Wildlife Services to research feral swine habitat use and impacts.</li> <li>• Provided support through the MISGP to the Midwest Invasive Species Information Network to continue to centralize data on invasive species distribution and create a centralized location to track invasive species treatments.</li> <li>• Worked with state staff and partners to draft the state’s first Terrestrial Invasive Species State</li> </ul>

	<p>Management Plan.</p> <ul style="list-style-type: none"> <li>Created the state’s first Terrestrial Invasive Species Watch list.</li> </ul> <p>Michigan administers an Invasive Species Grants Program (MISGP). The Departments of Natural Resources, Environmental Quality and Agriculture and Rural Development have partnered to address strategic issues of prevention, detection, eradication, and control for both terrestrial and aquatic invasive species in Michigan.</p> <p>The main objectives of the MISGP program are to:</p> <ul style="list-style-type: none"> <li>Prevent new introductions of invasive species through outreach and education.</li> <li>Monitor for new invasive species as well as expansions of current invasive species.</li> <li>Respond and conduct eradication efforts to new findings and range expansions.</li> <li>Manage and control key colonized species in a strategic manner.</li> </ul> <p>The following list from the DNR Internet site highlights some of the most recent efforts to combat invasive species:</p> <ul style="list-style-type: none"> <li>Development of a <a href="#">Strategic Framework for the Management and Control of Invasive Phragmites in Michigan</a></li> <li>Participation in the <a href="#">Grand Traverse Area phragmites control program</a></li> <li>Coordination of <a href="#">Volunteer Stewardship Workdays</a> by the DNR Parks and Recreation Division</li> <li>Collaboration on <a href="#">Asian carp prevention</a> and response planning by the DNR Fisheries Division</li> <li><a href="#">Early Detection and Rapid Response project updates</a> for invasive aquatic plant species by the DNR Wildlife Division</li> <li><a href="#">Feral swine control</a></li> <li>In 2015, a new joint-position was created between the wildlife and forest resources divisions within DNR to focus on control of invasive species. An interview with this staff member was conducted. There are several focus areas, including creating local invasive species cooperative management areas throughout the state. Much of this is being led by local county Conservation Districts.</li> </ul> <p>All of these activities are commendable. During 2015 site visits, however, interviews with timber producers and</p>
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		<p>FME staff indicate that practices to prevent the spread of invasive species are not being implemented or have been slow to launch. A few field staff expressed concern about the absence of specific timber sale requirements related to invasive species prevention.</p> <p>See <b>OBS 2015.2</b></p>
<p><b>6.3.i</b> 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>FME maintains a <a href="#">Prescribed Burning website</a> that describes a program fully in conformance with these requirements.</p> <p>There were 102 prescribed fires on 10,287 acres on state forest lands for purposes of fuel reduction, site preparation, habitat restoration, and invasive species control in 2014 (as of July 29, 2015). FME posts <a href="#">maps of past prescribed burns</a> on the Internet. As of September 2015 a statewide total of 328 wildfires burned 2,890 acres.</p> <p>During 2015 site visits, auditors observed a number of prescribed fire sites that promoted forest regeneration and wildlife habitat improvement. See field site notes.</p>
<p><b>6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.</b></p>	<p>C</p>	
<p><b>6.4.a</b> 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) <b>GAP analyses</b>; 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>C</p>	<p>FME has combined its RSA and HCVF analysis under the Ecological Reference Areas (ERA) classification in with feedback on the process design from the Michigan Natural Features Inventory (MNFI). GAP analyses are included as a part of MNFI’s review of natural ecosystems throughout the state and their quantitative and qualitative representation in the landscape. FME also receives feedback from staff in the forest resources, wildlife, and fisheries divisions on ecosystems and landscape features in need of protection based on adequacy of representation. FME maintains documentation of its classification process in the ERA Planning Framework for ERAs on State Forest Lands. More information is also available from MNFI.</p>
<p><b>6.4.b</b> Where existing areas within the landscape, but external to the FMU, are not of adequate protection, size, and configuration to serve as representative samples of existing ecosystems, forest owners or managers, whose properties are conducive to the establishment of such areas, designate ecologically viable RSAs to serve these purposes.</p>	<p>C</p>	<p>FME has established ERAs as observed during field visits in the current assessment. FME provided examples of documentation of the process used to determine which sites serve as RSAs or HCVFs based on information cited in 6.4.a and field-level data as described in the ERA Business Framework cited within the ERA Planning Framework for ERAs on State Forest Lands.</p>

<p>Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.</p>		
<p><b>6.4.c</b> Management activities within RSAs are limited to low impact activities compatible with the protected RSA objectives, except under the following circumstances:  a) harvesting activities only where they are necessary to restore or create conditions to meet the objectives of the protected RSA, or to mitigate conditions that interfere with achieving the RSA objectives; or  b) road-building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the RSA was designated.</p>	C	<p>Measures to maintain, enhance or manage RSAs are described in compartment-level reviews and may include harvesting or prescribed burns (e.g., jack pine forests, oak-pine barrens, etc.) and maintenance or upgrades of existing infrastructure.</p>
<p><b>6.4.d</b> 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>FME recently modified its RSA classification framework in 2015, which is currently being used during compartment reviews to classify ERAs per the timeline established therein.</p>
<p><b>6.4.e</b> 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>FME has established ERAs compatible with RSA/HCVF terminology, including interior core habitats. Habitat connectivity is considered during the compartment review process, including connectivity to no-harvest areas. For example, the Loon Lake karst sinkhole complex contains buffer areas that connect sinkholes. The Rice Pond pine-oak barren includes buffer areas within the prescribed burn area adjacent to areas that are managed using timber harvests to mimic the effects of fire while reducing risk to infrastructure and human life.</p>
<p><b>6.5 Written guidelines shall be prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.</b></p>	C	
<p><b>6.5.a</b> The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.</p>	C	<p>FME’s BMP manuals cover all requirements and are found here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-31154_31261---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-31154_31261---,00.html</a>.</p>
<p><b>6.5.b</b> Forest operations meet or exceed Best Management Practices (BMPs) that address components of the Criterion where the operation takes place.</p>	C	<p>No BMP violations were observed during site visits in the 2015 assessment. All stream crossings observed were consistent with current BMP recommendations. Waterbars and other drainage features were appropriately spaced and constructed.</p>
<p><b>6.5.c</b> Management activities including site preparation, harvest prescriptions, techniques, timing, and equipment are selected and used to protect soil and water resources and to avoid erosion, landslides, and significant soil disturbance. Logging and other activities that significantly</p>	C	<p>A variety of documents establish standards and expectations that relate to this indicator: (1) Within-stand retention guidelines; (2) Woody biomass harvesting guidance; and (3) Sustainable soil and water quality practices on forest land.</p>

<p>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"> <li>• 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.</li> <li>• Disturbance of topsoil is limited to the minimum necessary to achieve successful regeneration of species native to the site.</li> <li>• Rutting and compaction is minimized.</li> <li>• Soil erosion is not accelerated.</li> <li>• Burning is only done when consistent with natural disturbance regimes.</li> <li>• Natural ground cover disturbance is minimized to the extent necessary to achieve regeneration objectives.</li> <li>• Whole tree harvesting on any site over multiple rotations is only done when research indicates soil productivity will not be harmed.</li> <li>• Low impact equipment and technologies is used where appropriate.</li> </ul>		
<p><b>6.5.d</b> The transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, maintained, and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects, while allowing for customary uses and use rights. This includes:</p> <ul style="list-style-type: none"> <li>• access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts;</li> <li>• road density is minimized;</li> <li>• erosion is minimized;</li> <li>• sediment discharge to streams is minimized;</li> <li>• there is free upstream and downstream passage for aquatic organisms;</li> <li>• impacts of transportation systems on wildlife habitat and migration corridors are minimized;</li> <li>• area converted to roads, landings and skid trails is minimized;</li> <li>• habitat fragmentation is minimized;</li> <li>• unneeded roads are closed and rehabilitated.</li> </ul>	C	<p>A general review of each state forest’s transportation network is included in the regional FMPs. BMP manuals address all elements of this indicator as well. During the onsite audit, the audit team observed examples of temporary and seasonal roads that are closed to conduct repairs and other maintenance. Road density may be reviewed during the compartment review process and road closures have been recommended in the past; however, since FME typically uses county road systems, it does not exercise control over many of them. As observed during site visits, FME uses waterbars and other drainage features to control erosion and sedimentation. All crossings observed had properly installed and sized culverts or bridges to facilitate the passage of aquatic organisms. Through use of existing roads, landings, and other infrastructure, FME reduces or avoids losing productive area and impacts to other natural resources.</p>
<p><b>6.5.e.1</b> In consultation with appropriate expertise, the forest owner or manager implements written <b>Streamside</b></p>	C	<p>Written guidelines for SMZs are found in “Sustainable Soil and Water Quality Practices on Forest Land” (formerly</p>

<p><b>Management Zone (SMZ) buffer</b> 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, 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>Best Management Practices (BMP) on Forest Land). This manual describes a set of voluntary Forestry Best Management Practices (BMPs) that protect soil and water resources while allowing appropriate use of forest resources. There are no minimum requirements established for the Lake States-Central Hardwoods region in the FSC-US standard.</p>
<p><b>6.5.e.2</b> 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>There are no minimum requirements established for the Lake States-Central Hardwoods region in the FSC-US standard.</p>
<p><b>6.5.f</b> Stream and wetland crossings are avoided when possible. Unavoidable crossings are located and constructed to minimize impacts on water quality, hydrology, and fragmentation of <b>aquatic habitat</b>. 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>During field visits, the audit team specifically reviewed stream and wetland crossings on timber sales marked for summer or frozen-ground conditions. During soft ground conditions, auditors observed evidence that mats were used to reduce soil compaction and that no-cut strips were used to avoid crossings. Stream crossings observed had bridges or open-bottom culverts installed to allow for aquatic species’ movement and natural hydrological processes to occur.</p>
<p><b>6.5.g</b> Recreation use on the FMU is managed to avoid negative impacts to soils, water, plants, wildlife and wildlife habitats.</p>	<p>C</p>	<p>Through collaboration between wildlife, fisheries, forestry, and enforcement staff, FME demonstrates a high level of monitoring of trails, hunting grounds and fisheries to control the effects of recreation. Trails are designed to avoid or control impacts to sensitive features, such as through the use of fences and educational signs.</p>

<p><b>6.5.h</b> 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.</p>	<p>C</p>	<p>No grazing by domesticated animals is permitted on the FMU and no such grazing has been detected according to interviews with FME staff.</p>
<p><b>6.6. Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.</b></p>	<p>C</p>	
<p><b>6.6.a</b> 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).</p>	<p>C</p>	<p>In February 2015, FSC adopted a new standard listing chemicals considered highly hazardous (FSC-STD-30-001 V1-0; FSC-STD-30-001a). Michigan DNR Work Instruction 2.2, “Use of Pesticides and Other Chemicals on State Forest Lands” indicates the organization is using four products on the new HHP list:</p> <ul style="list-style-type: none"> <li>• Diflubenzuron (Dimlin® used to control insect pests): Covered by an approved FSC derogation until 1/5/2020.</li> <li>• Imidacloprid (CoreTect® used in hemlock wooly adelgid control). DNR seeking a derogation by June 30, 2016.</li> <li>• Emamectin benzoate (TREE-äge® used in emerald ash borer control). DNR seeking a derogation by June 30, 2016.</li> <li>• Rotenone (used for rough fish eradication in lakes and ponds). DNR seeking a derogation by June 30, 2016.</li> <li>• Etofenprox (Zenivex E20 or E4 RTU – used for mosquito control). Added to FSC HHP list in 2015. Use to be discontinued by June 30, 2016. No plans for derogation application.</li> <li>• Michigan DNR is participating in a multi-state derogation application effort that includes a stakeholder consultation being conducted by FSC-US.</li> </ul> <p>See <b>OBS 2015.3.</b></p>
<p><b>6.6.b</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;</p>	<p>C</p>	<p>Per Michigan DNR Work Instruction 2.2, the organization uses chemicals only when one of the conditions described in elements a)-d) has been met. Per Work Instruction 2.3 “Integrated Pest Management and Forest Health”, forest</p>

<p>b) prohibitively expensive, taking into account overall environmental and social costs, risks and benefits; c) the only effective means for controlling invasive and exotic species; or d) result in less environmental damage than non-chemical alternatives (e.g., top soil disturbance, loss of soil litter and down wood debris). If chemicals are used, the forest owner or manager uses the least environmentally damaging formulation and application method practical.</p> <p>Written strategies are developed and implemented that justify the use of chemical pesticides. Whenever feasible, an eventual phase-out of chemical use is included in the strategy. The written strategy shall include an analysis of options for, and the effects of, various chemical and non-chemical pest control strategies, with the goal of reducing or eliminating chemical use.</p>		<p>health staff helps ensure that insect pests are detected and treated early and only when and where necessary. Timber Management Specialist / FRD, or other designee with commercial applicator certification reviews Pesticide Application Plans.</p> <p>On 2015 site visits, auditors observed that non-chemical site preparation is extensively utilized, particularly mechanical scarification and/or disc-trenching. On the Gaylord Unit, auditors observed a Kirtland’s Warbler block regeneration harvest that successfully employed prescribed fire for natural seeding, rather than use of chemicals and planting. See field site notes.</p>
<p><b>6.6.c</b> 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>	<p>C</p>	<p>Work Instructions 2.2 require, “Minimize pesticide use to achieve management objectives. Use alternatives to chemical pesticides when they are reasonably cost effective, and available and meet management objectives. When chemical pesticides are used, select the least-toxic, narrowest spectrum products labeled for the target species.”</p> <p>Work instructions specify aerial, ground and hand application buffers around the following features:</p> <ul style="list-style-type: none"> <li>• Occupied Dwellings</li> <li>• Seasonal Dwellings</li> <li>• Human Drinking Water Sources</li> <li>• Stock Water Sources</li> <li>• Active Streams, Lakes, Ponds, &amp; Major Waterways</li> <li>• Flowing Ditches &amp; Intermittent Streams</li> <li>• Farm / Crop Lands</li> <li>• Public Roadway</li> </ul> <p>Personal protective equipment must be used as specified on product labels. Incidents of worker exposure to pesticides must be documented on the Pesticide Application Report.</p>
<p><b>6.6.d</b> Whenever chemicals are used, a written prescription is prepared that describes the site-specific hazards and environmental risks, and the precautions that workers will employ to avoid or minimize those hazards and risks, and includes a map of the treatment area. Chemicals are applied only by workers who have received</p>	<p>C</p>	<p>A written Pesticide Application Plan (PAP) is required. Per the work instructions, “The PAP must include personal and environmental safety precautions, potential environmental effects, and the location of any environmentally sensitive areas, including threatened or endangered species and species of special concern.” PAP’s examined as part of 2015 site visits included a map</p>

<p>proper training in application methods and safety. They are made aware of the risks, wear proper safety equipment, and are trained to minimize environmental impacts on non-target species and sites.</p>		<p>of the treatment area.</p> <p>All FME personnel directly involved in the application of pesticides, other than ready-to-use pesticides as describe below, must be commercially certified applicators or as registered technicians by the Michigan Department of Agriculture and Rural Development (MDARD), Pesticide and Plant Management Division (Policy 592). Applicators that use general use, ready-to-use (RTU) pesticides are exempt from these certification requirements, but they must follow directions and use appropriate PPE. RTU pesticides can be applied by non-certified personnel, as long as they are only applied in the original container consistent with the label directions.</p> <p>During the 2015 site visits, interviews with staff including an Atlanta Unit equipment operator indicate that appropriate personnel have commercial pesticide certification. The Atlanta dozer operator showed the auditors spill equipment on the machine and in the service truck.</p>
<p><b>6.6.e</b> 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.</p>	<p>C</p>	<p>The Timber Management Specialist maintains records of control measures and infestations. Wildlife Action Plans also include measures for monitoring chemical use for adaptive management. FME includes a summary of chemical use research on invasive species in its Sustainable Forestry Research summaries, which are produced annually. Exposure is tracked per Michigan law.</p> <p>See <b>OBS 2015.3</b>.</p>
<p><b>6.7. Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.</b></p>	<p>C</p>	
<p><b>6.7.a</b> The forest owner or manager, and employees and contractors, have the equipment and training necessary to respond to hazardous spills.</p>	<p>NC</p>	<p>Procedures to deal with spills are listed in Work Instruction 2.2. The DNR Pesticide Use Guidelines require that applicator vehicles associated with applications have spills kits. Employee and logger BMP training includes spill reporting requirements and precautions.</p> <p>See <b>CAR 2015.4</b>.</p>
<p><b>6.7.b</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.</p>	<p>C</p>	<p>Michigan BMP guidelines have a policy on containment. Instructions for reporting spills are available from the <a href="#">DEQ website</a>.</p>
<p><b>6.7.c.</b> Hazardous materials and fuels are stored in leak-</p>	<p>C</p>	<p>This indicator is addressed in Work Instruction 2.2m as</p>

<p>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.</p>		<p>follows: “Only pesticides needed for the current or next fiscal year will be purchased. The storage and transportation of pesticides shall meet all state and federal guidelines, as indicated on the label. Storage of unused and surplus pesticides is discouraged. All rinsate and residue should be applied as per label instructions. If necessary, unused chemicals are disposed of in a manner consistent with labeling.”</p> <p>Interviews with field staff in 2015 confirm that very little pesticides are stored at FME’s facilities. Most large-scale application is done through commercial contractors.</p>
<p><b>6.8. Use of biological control agents shall be documented, minimized, monitored, and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.</b></p>	<p>C</p>	
<p><b>6.8.a</b> Use of <i>biological control agents</i> are used only as part of a pest management strategy for the control of invasive plants, <i>pathogens</i>, 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>FME works closely with other state and federal agencies to research and experiment with biological control agents for control of forest pests and invasive species. Before such agents are used, national peer review is completed and permits are acquired from USDA APHIS. Biological controls have been used or are being explored for pests such as loosestrife, Eurasian water milfoil, emerald ash borer, garlic mustard, spotted knapweed, leafy spurge, common tansy, gypsy moth and other pests as part of an integrated pest management program.</p>
<p><b>6.8.b</b> If biological control agents are used, they are applied by trained workers using proper equipment.</p>	<p>C</p>	<p>These requirements are addressed in Work Instructions 2.2 and 2.3 Integrated Pest Management and Forest Health.</p>
<p><b>6.8.c</b> 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>These requirements are addressed in Work Instructions 2.2 and 2.3 Integrated Pest Management and Forest Health.</p>
<p><b>6.8.d</b> Genetically Modified Organisms (GMOs) are not used for any purpose</p>	<p>C</p>	<p>Use of genetically modified organisms is not allowed on certified land in the State Forest system. Not allowing use of genetically modified organisms applies to all organisms, including trees (Work Instruction 2.3).</p>
<p><b>6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.</b></p>	<p>C</p>	
<p><b>6.9.a</b> The use of <i>exotic species</i> is contingent on the availability of credible scientific data indicating that any</p>	<p>C</p>	<p>FME does not plant exotic tree species. Any exotic plants used are for cover crops to prevent erosion. <a href="#">Guidelines</a></p>

<p>such species is non-invasive and its application does not pose a risk to native biodiversity.</p>		<p><a href="#">for selection of seed mixes</a> are provided by DEQ.</p>
<p><b>6.9.b</b> If exotic species are used, their provenance and the location of their use are documented, and their ecological effects are actively monitored.</p>	<p>C</p>	<p>Site specific planting/seeding plans are used and required, even for seed mixes. Interviews with staff indicate the required information is captured in stand records as observed at one site in the Traverse State Forest. Several non-native cover crop species are recommended for planting (e.g., annual rye, white Dutch clover), but these are selected by DEQ because of their non-invasive qualities. Planting recommendations clearly warn against using hay as mulch because of the risk of invasive seeds.</p>
<p><b>6.9.c</b> 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>If needed, this would be consistent with other efforts to defend against invasive exotics. So far, such control has not been necessary, as reported by staff.</p>
<p><b>6.10. Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:</b>  <b>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.</b></p>	<p>C</p>	
<p><b>6.10.a</b> 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>FME’s land transactions including sales, purchases, easements, exchanges, etc. are <a href="#">publically disclosed</a>. With a large 4 million acre land base, adjustments to consolidate ownership, resolve conflicts, address new opportunities, and other purposes are constantly ongoing. In terms of direct sales/purchases, FME sold 1,280 acres in 2014 and purchased 2,518 acres. Use conversions out of natural forest occur rarely on the FMU. Small areas may be cleared for recreational trails, campgrounds, or mineral extraction (see 6.10.f), but the cumulative effect to the forested land base is negligible.</p> <p>Conversion of areas for oil, gas, and mineral (OGM) development occurs on a very limited portion of the FMU. Since most pads are 1-5 acres in size and are active for 1-30 years, several pad areas are restored to native forest cover as they are retired. The rate of area converted for OGM development has slowed on state lands. Given the restoration component, it is unlikely that conversion surpasses 0.2% of the FMU in a given year.</p>
<p><b>6.10.b</b> Forest <i>conversion</i> to non-forest land uses does not occur on high conservation value forest areas (note that</p>	<p>C</p>	<p>For OGM leases, FME screens potential lease areas as determined by private extraction companies to see if the</p>

<p>Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).</p>		<p>location will in any way hinder or enhance FME objectives. Once a general area is agreed upon, such companies must complete an environmental impact assessment that includes a screening process for HCV, archaeological features, and other special sites.</p>
<p><b>6.10.c</b> 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 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>All proposed land transactions receive <a href="#">public notice</a> and review to assure net public benefit.</p> <p>FME receives payment from oil, gas and mineral (OGM) lessees that is placed into the <a href="#">Michigan Natural Resources Trust Fund</a>. The MNRTF is a restricted fund established in 1976 to provide funding for public acquisition of lands for resource protection and outdoor recreation, as well as for public outdoor recreation development projects. It is funded through interest earned on funds derived from the development of publicly owned minerals. Over the past 39 years, the Trust Fund has granted more than \$1 billion to state and local units of government to develop and improve recreation opportunities in Michigan. The converted OGM areas themselves frequently are used as wildlife openings during restoration, as observed on the Atlanta State Forest’s elk management area.</p>
<p><b>6.10.d</b> 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>FME practices natural forest management. It has no “plantations” as defined under FSC Principle 10. Furthermore, there is no conversion to plantations. OGM areas are not restored to plantations.</p>
<p><b>6.10.e</b> 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>Options for forest cover type manipulation are based on <a href="#">Michigan plant community</a> research.</p> <p>The <a href="#">Red Pine Management Guidelines</a> incorporate clear justification for those situations where hardwood sites are converted to red pine stands (the most common instance of such conversion). Guidelines for planting red pine in more natural configurations address the intent of C.6.3. It should be noted that red pine was historically a widespread forest type in Michigan.</p>
<p><b>6.10.f</b> 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</p>	<p>C</p>	<p>There are some instances of gas wells on the State Forest and the potential for additional mineral drilling. Areas converted from forest for such purposes are clearly mapped and the CB is notified. Removal of these areas from the scope is not warranted as they are a small portion of the FMU and old well pads are regularly shut down and the sites restored to native vegetative cover.</p> <p>FME exercises control on the location of well pads and in most cases owns the OGM rights, which are typically leased to third parties. See 6.10.a-d.</p>

<p>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><b>Principle #7: A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.</b></p>		
<p><b>7.1. The management plan and supporting documents shall provide:</b>  <b>a. Management objectives. b) description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.</b>  <b>b. Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories. d) Rationale for rate of annual harvest and species selection. e) 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.</b>  <b>b) h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.</b>  <b>i) Description and justification of harvesting techniques and equipment to be used.</b></p>	<p>C</p>	<p>FMP components:</p> <ul style="list-style-type: none"> <li>• Michigan State Forest Management Plan (2008) and as amended (2014);</li> <li>• Regional State Forest Management Plans (2013): <ul style="list-style-type: none"> <li>○ Western Upper Peninsula (WUP)</li> <li>○ Eastern Upper Peninsula (EUP)</li> <li>○ Northern Lower Peninsula (NLP)</li> </ul> </li> <li>• Work instructions as described on the FME’s webpage: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331517--_00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331517--_00.html</a></li> </ul>
<p><b>7.1.a</b> 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>This is covered in sections 1.1-1.6 and appendices of the state FMP, and chapter 1 and appendices of the regional FMPs.</p>
<p><b>7.1.b</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>This is covered in sections 2.1-2.3 of the state FMP, and chapter 2 of regional FMPs.</p>
<p><b>7.1.c</b> The management plan describes:  a) current conditions of the timber and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions.</p>	<p>C</p>	<p>This is covered in chapters 3 and 4 of the state and regional FMPs.</p> <p>The Forest Resources Division has developed a <a href="#">State Forest Management Plan – 2008 (10-year plan)</a> that provides strategic direction with goals and objectives for management of Michigan’s nearly 4 million acres of state forest. The plan was amended in 2014. <a href="#">State Forest Management Plan - 2014 amendment (10-year plan)</a>.</p> <p><a href="#">Regional State Forest Management Plans</a> – one each for the <a href="#">western Upper Peninsula</a>, the <a href="#">eastern Upper</a></p>

		<p><a href="#">Peninsula</a> and the <a href="#">northern Lower Peninsula</a> – provide landscape-level operational direction for the management of state forest resources for each of 101 management areas in the entire state forest.</p> <p>FME’s GIS system including MiFI and VMS modules contains data related to this indicator. Some of the data is <a href="#">publically accessible</a>. Auditors observed a demonstration of the system’s capabilities during the 2015 audit.</p>
<p><b>7.1.d</b> The management plan includes a description of the landscape within which the FMU is located and describes how landscape-scale habitat elements described in Criterion 6.3 will be addressed.</p>	C	<p>Chapters 4 and 5 of the state FMP, and chapter 4 of the regional FMPs meet this requirement.</p>
<p><b>7.1.e</b> 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"> <li>• rare, threatened, or endangered species and natural communities (see Criterion 6.2);</li> <li>• plant species and community diversity and wildlife habitats (see Criterion 6.3);</li> <li>• water resources (see Criterion 6.5);</li> <li>• soil resources (see Criterion 6.3);</li> <li>• Representative Sample Areas (see Criterion 6.4);</li> <li>• High Conservation Value Forests (see Principle 9);</li> <li>• Other special management areas.</li> </ul>	C	<p>Chapters 4 and 5 of the state FMP, and chapter 4 of the regional FMPs meet this requirement. Additionally, FME has its Ecological Reference Area (ERA) planning framework for classifying RSAs and HCVFs. Other divisions within DNR, such as fisheries, have their own written guidelines for water and wildlife resources.</p>
<p><b>7.1.f</b> If invasive species are present, the management plan describes invasive species conditions, applicable management objectives, and how they will be controlled (see Indicator 6.3.j).</p>	C	<p>Chapters 3 and 4 of the state and regional FMPs meet this requirement.</p> <p>Both Michigan DNR and DEQ administer intensive invasive species identification and control programs. Forest health procedures are described in the State Forest and Regional Plans, Wildlife and Parks plans, and in Work Instructions. A <a href="#">summary of invasive species control programs</a> is available on the Internet.</p>
<p><b>7.1.g</b> 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>	C	<p>Chapters 3 and 4 of the state and regional FMPs meet this requirement.</p> <p>Section 3.2, pages 44-52, of the SFMP addresses insect pests, diseases, and other threats to forest health. Section 4.1.7 describes management practices for forest pests. A summary of <a href="#">DNR’s Forest Health Program</a> is available on the Internet.</p>
<p><b>7.1.h</b> If chemicals are used, the plan describes what is being used, applications, and how the management system conforms with Criterion 6.6.</p>	C	<p>Addressed in Michigan DNR Work Instruction 2.2. See additional information under Criterion 6.6. FME tracks chemical derogations here: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331577--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331577--,00.html</a></p>

<p><b>7.1.i</b> 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>The SFMP specifies that “When using biological controls to kill pests, use only host specific predators, parasites and pathogens with proven effectiveness.” Special management prescriptions are required for biological control agents.</p> <p>Use of biological controls is governed by work instruction 2.3, and described in chapters 3 and 4 of the state FMP. Use of biological control agents is governed by documented requirements per the Michigan Department of Agriculture and USDA APHIS.</p>
<p><b>7.1.j</b> The management plan incorporates the results of the evaluation of social impacts, including:</p> <ul style="list-style-type: none"> <li>• traditional cultural resources and rights of use (see Criterion 2.1);</li> <li>• potential conflicts with customary uses and use rights (see Criteria 2.2, 2.3, 3.2);</li> <li>• management of ceremonial, archeological, and historic sites (see Criteria 3.3 and 4.5);</li> <li>• management of aesthetic values (see Indicator 4.4.a);</li> <li>• public access to and use of the forest, and other recreation issues;</li> <li>• 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).</li> </ul>	<p>C</p>	<p>Chapters 3, 4 and 5 of the state FMP cover this requirement. Regional plans include reference to ownership and use rights, potential historical and archaeological resources, etc.</p>
<p><b>7.1.k</b> The management plan describes the general purpose, condition and maintenance needs of the transportation network (see Indicator 6.5.e).</p>	<p>C</p>	<p>Chapters 4 and 5 of the state FMP cover this requirement. Work instructions under group 3 and chapter 3 of the regional FMPs also are relevant.</p>
<p><b>7.1.l</b> 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>	<p>C</p>	<p>FME released an <a href="#">updated silviculture guide</a> in March 2015. That taken together with directions in Regional Plans fully addresses this indicator.</p> <p>Chapters 4 and 5 of the state FMP cover this requirement. Chapter 4 of the regional FMPs details some elements of common management practices.</p>
<p><b>7.1.m</b> The management plan describes how species selection and harvest rate calculations were developed to meet the requirements of Criterion 5.6.</p>	<p>C</p>	<p>As described in the State Forest Plan, these requirements are addressed through the <a href="#">annual compartment review process</a>. A <a href="#">summary of the harvest rate calculation procedure</a> to meet to requirements of Criterion 5.6 is available online (accessed 10/2/2015).</p> <p>Each regional FMP includes a description of the harvest rate calculations in Appendix D.</p>

<p><b>7.1.n</b> The management plan includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.</p>	<p>C</p>	<p>Chapter 6 of the state FMP and chapter 5 of the regional FMPs cover monitoring. Work instructions and related documents or procedures cited therein address monitoring.</p>
<p><b>7.1.o</b> 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.</p>	<p>C</p>	<p>Maps that address this requirement are included in state and regional FMPs. FME also prepares site-specific maps for implementing management activities that include ownership boundaries, special or sensitive features, and other elements.</p>
<p><b>7.1.p</b> The management plan describes and justifies the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.</p>	<p>NC</p>	<p>FME’s BMP manual describes cases where specific equipment is recommended based on sensitive conditions (Sustainable Soil and Water Quality Practices on Forest Land; DNR and DEQ 2009).  See <b>CAR 2015.5</b>.</p>
<p><b>7.1.q</b> Plans for harvesting and other significant site-disturbing management activities required to carry out the management plan are prepared prior to implementation. Plans clearly describe the activity, the relationship to objectives, outcomes, any necessary environmental safeguards, health and safety measures, and include maps of adequate detail.</p>	<p>C</p>	<p>FME prepares compartment-level plans with maps prior implementing management activities. Plans include a narrative that describes the rationale and objectives of the activity, as well as protected or sensitive areas within the area. Health &amp; safety measures are referenced in sales contracts.</p>
<p><b>7.1.r</b> The management plan describes the stakeholder consultation process.</p>	<p>C</p>	<p>Work instruction 1.5 addresses this requirement, including other policies involved in providing stakeholders access to consultation processes.</p>
<p><b>7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.</b></p>	<p>C</p>	
<p><b>7.2.a</b> 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>FME amended its 2008 management plan in 2014. The 2008 plan has not yet reached its ten year limit. The 2014 amendment was updated due to regional management plans being completed and some conversation initiatives being added. FME updates supporting documents frequently based on the results of monitoring, new scientific and technical information, and changing circumstances. For example, guidance on forest health issues is frequently updated based on the results of field trials.</p>
<p><b>7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plans.</b></p>	<p>C</p>	
<p><b>7.3.a</b> 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>FME presented training plans with budgets for FY2015, as well as a summary of training courses offered to wildlife division staff. Interviews with wildlife, fire, and forestry staff indicate that FME implements training plans as</p>

		<p>described. For example, staff stated that training had occurred in several aspects of fire management, GIS, cruising and marking, pesticide applicator license, woody debris evaluation in streams, lowland harvesting, etc. Recently, training in MiFi and other new forest management tools has occurred to ensure that these are used, according to interviews with FME forestry staff.</p> <p>FME maintains a staff hierarchy to ensure that employees' work is supervised and/ or reviewed according to applicable regulations and requirements. According to interviews, logging contractors interviewed receive instruction and oversight from their own managers periodically, but primarily receive training to meet management objectives.</p> <p>According to interviews with the training manager and as verified in her office, every employee has training records maintained on two databases (one maintained by state and other by federal fire (IQS)). The database includes a list of trainings, length of trainings, etc. Each position requires basic qualifications and trainings that each employee should attain throughout their career. Employees are free to suggest trainings for themselves to meet their own career objectives.</p>
<p><b>7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.</b></p>	<p>C</p>	
<p><b>7.4.a</b> 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>All management planning documents are available on the FME's webpage: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301---,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301---,00.html</a>.</p>
<p><b>7.4.b</b> Managers of public forests make draft management plans, revisions and supporting documentation easily accessible for public review and comment prior to their implementation. Managers address public comments and modify the plans to ensure compliance with this Standard.</p>	<p>C</p>	<p>Draft management documents are made available on the FME's website and via request at local FME offices. Public meetings are held after the release of draft compartment plans in which the public may express its concerns over the FME's management plans prior to implementation. A summary of comments received is annexed to each compartment review. When a comment leads to a modification of the plan, this is noted in compartment plans and/or contracts. An example observed in the 2015 audit includes a northern hardwood sale that had less timber marked for removal closer to a road to address visual impacts noted by adjacent landowners.</p>
<p><b>Principle #8: Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess</b></p>		

<b>the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.</b>		
<b>8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations, as well as, the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.</b>	C	
<b>8.1.a</b> Consistent with the scale and intensity of management, the forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written monitoring protocol.	C	The state and regional FMPs, as well as FME’s work instructions, contain reference to monitoring protocols used to ensure that monitoring is regular and replicable. Work instructions and related documents or procedures cited therein address monitoring.
<b>8.2. Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators: a) yield of all forest products harvested, b) growth rates, regeneration, and condition of the forest, c) composition and observed changes in the flora and fauna, d) environmental and social impacts of harvesting and other operations, and e) cost, productivity, and efficiency of forest management.</b>	C	
<b>8.2.a.1</b> For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.	C	FME’s forest geospatial and inventory data as managed through its MiFI and VMS modules and annual compartment review field evaluations, FIA plot surveys, regeneration surveys, and forest health surveys fully address the requirements of this indicator.
<b>8.2.a.2</b> Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information shall include date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative.	C	Resource Damage Reports (RDR) are logged and tracked in the RDR database. Actual harvest levels, including any abnormal level of harvesting activity in response to, for instance, mortality, are tracked and well known to Departmental planners and managers.  As observed during 2015 site visits, extensive out-of-YOE salvage harvests of Emerald Ash Borer and Beech Bark Disease affected stands continued this year in the northern lower peninsula and eastern upper peninsula regions which contributed to the higher volume in FY14. Corresponding updates of the forest inventory will account for these out-of-YOE salvage harvests in future annual work plans.
<b>8.2.b</b> The forest owner or manager maintains records of harvested timber and NTFPs (volume and product and/or grade). Records must adequately ensure that the requirements under Criterion 5.6 are met.	C	FME produces annual volume summary consistent with the requirements of the standard. Public annual reports are available online. See indicators under Criterion 5.6 for details.
<b>8.2.c</b> The forest owner or manager periodically obtains data needed to monitor presence on the FMU of:	C	Natural community surveys are currently being conducted in areas of the State Forest by Michigan

<ol style="list-style-type: none"> <li>1) Rare, threatened and endangered species and/or their <i>habitats</i>;</li> <li>2) Common and rare plant communities and/or habitat;</li> <li>3) Location, presence and abundance of invasive species;</li> <li>4) Condition of protected areas, set-asides and buffer zones;</li> <li>5) High Conservation Value Forests (see Criterion 9.4).</li> </ol>		<p>Natural Features Inventory in FY 2015 (see Criterion 9.4). See 6.3.h for invasive species.</p> <p>FME foresters and biologists conduct an on-site assessment of each stand proposed for treatment in a year of entry (YOE) compartment. Determining the presence of RTE species and high quality natural plant communities is part of that assessment. The Michigan Natural Features Inventory (MNFI) maintains a database of the observations and locations of RTE species and plant communities. As part of the compartment review process, foresters and biologists consult this database to check for records of RTE species or high quality natural community occurrences, and to assess the potential impacts of proposed forest treatments.</p> <p>FME’s Wildlife Division monitors some wildlife populations by conducting or cooperating with wildlife surveys. The division annually surveys for: bald eagles, osprey, woodcock, waterfowl, Kirtland’s warbler, sharp-tailed grouse, and frogs &amp; toads. Biennial surveys were conducted in 2014 for black bear and elk. A biennial survey is being conducted in 2015 for wolves and moose. An annual bear bait survey is geographically restricted to Drummond Island. The Division uses annual registration of harvested animals to monitor for population changes in deer, elk, bear, otter, fisher, and marten. The Division also cooperates in the banding of woodcock, ducks, and geese, which provides another means of monitoring survival rates and population trends. Although these surveys generally have statewide or regional scopes, they all include significant amounts of state forest land.</p>
<p><b>8.2.d.1</b> Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective.</p>	<p>C</p>	<p>FME’s prescriptions are reviewed in the field at least biweekly during operations, according to interviews with staff and harvest inspection records reviewed. Regeneration surveys are conducted as a part of monitoring natural and assisted regeneration 5-10 years post-harvest as scheduled in compartment calendars, as confirmed in interviews with state foresters and examination of harvest prescriptions for all three districts visited.</p>
<p><b>8.2.d.2</b> A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.</p>	<p>C</p>	<p>Resource Damage Reports (RDR) are logged and tracked in the RDR database. Each district presented examples of RDR reports. FME is taking on a state-wide project to review stream-crossings for prioritizing upgrades, which may include replacing culverts with bridges or use of alternatively designed culverts.</p>
<p><b>8.2.d.3</b> The landowner or manager monitors relevant</p>	<p>C</p>	<p>FME demonstrated evidence of monitoring in its fiscal</p>

<p>socio-economic issues (see Indicator 4.4.a), including the social impacts of harvesting, participation in local economic opportunities (see Indicator 4.1.g), the creation and/or maintenance of quality job opportunities (see Indicator 4.1.b), and local purchasing opportunities (see Indicator 4.1.e).</p>		<p>year accomplishment reports, economic working group information presented to audit team on FTP site, participation in the 2013 forest products summit, and other annual reports prepared by other divisions (e.g., 2014 wildlife division annual report).</p> <p>See OBS cited in 4.4.a.</p>
<p><b>8.2.d.4</b> Stakeholder responses to management activities are monitored and recorded as necessary.</p>	C	<p>FME staff at local offices discussed day-to-day contacts with local elected officials, user-groups, and other interested parties during the 2015 audit.</p>
<p><b>8.2.d.5</b> Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3).</p>	C	<p>FME implemented actions to invite the opportunity to jointly monitor sites of cultural significance to local tribes in its response to Minor CAR 2010.3 in 2011. Tribes and tribal representatives interviewed in 2015 did not express concerns over monitoring cultural sites.</p>
<p><b>8.2.e</b> The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.</p>	C	<p>Forest Resources Division has published an Accomplishments Report for FY 2014 that addresses productivity and efficiency of management areas under FME’s jurisdiction.</p> <p>According to an interview with the sections manager, FME monitors costs and revenue using an accounting system. This information is presented to forest managers during monthly meetings so that they can monitor costs and projected revenues. Spending requests are subject to approval and tracked via the sections manager to ensure that FME remains within its budgetary constraints. If a staff member fails to report spending, he or she is subject to a purchasing violation.</p>
<p><b>8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."</b></p>	C	
<p><b>8.3.a</b> 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.</p>	C	<p>Refer to COC indicators for FMEs.</p>
<p><b>8.3.b</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.</p>	C	<p>Refer to COC indicators for FMEs.</p>
<p><b>8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.</b></p>	C	

<p><b>8.4.a</b> 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.</p>	<p>C</p>	<p>FME does not yet have a summary of how it has met its state forest management plan (2008) since it has not fully gathered information, much of which will be gathered in preparation for the 2018 state forest plan. The regional plans are monitored using quantitative and qualitative metrics. For example, the amount of acres treated is tallied to determine objectives for harvesting. This informs managers of how many acres to treat over time at each region. FME has plans to create a state of the state forest document, which will be published every ten years in preparation of management plan revision.</p>
<p><b>8.4.b</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.</p>	<p>C</p>	<p>FME stated that its monitoring of harvest levels and ERAs has shown that objectives are being met so far. FME has several plans to update management planning documents 2016-2018 based on monitoring information collected in recent years.</p>
<p><b>8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.</b></p>	<p>C</p>	
<p><b>8.5.a</b> 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.</p>	<p>C</p>	<p>See <b>OBS 2015.6</b>.</p>

**Principle #9: Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.**

**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).**

<p><b>9.1 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.</b></p>	<p>C</p>	
<p><b>9.1.a</b> 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>FME’s Work Instruction 1.4 provides guidance for identification of HCVs including several processes. Confirmed through demonstration of the mapping system, unit maps and field observations that it has completed these required steps. Confirmed through interviews that staff continue to receive, update and analyze data in an effort to continually add new areas and modify procedures.</p> <p>As confirmed through review of unit maps, interviews and document review, Type 1 and Type 2 old growth forests have been identified including a recently located potential OG1 Rich Conifer Swamp that has been confirmed through a contract with Natural Heritage.</p>
<p><b>9.1.b</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>Confirmed through document review that the FME consults with Natural Heritage, University experts, conservancy experts and local experts during the assessments.</p> <p>For example, as confirmed through review of unit maps, interviews and document review, the status of a recently located potential OG1 Rich Conifer Swamp has been confirmed through a contract with Natural Heritage.</p> <p>See <b>OBS 2015.7.</b></p>
<p><b>9.1.c</b> 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>FME’s website includes a summary of these required details: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331538--,00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331538--,00.html</a>.</p> <p>See <b>OBS 2015.7.</b></p>
<p><b>9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.</b></p>	<p>C</p>	
<p><b>9.2.a</b> 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 compartment review process includes review and consultation with experts of proposed management treatments and for example, as confirmed through review of unit maps, interviews and document review, the status of a recently located potential OG1 Rich Conifer Swamp has been confirmed through a contract with Natural Heritage. Management options are being implemented that protect or enhance HCVs including for example future planned activities observed during this 2015 audit at Rice Pond Pine Barrens.</p>
<p><b>9.2.b</b> On public forests, a transparent and accessible</p>	<p>C</p>	<p>The compartment review process includes public review</p>

<p>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>confirmed through interviews and review of documents and website: <a href="http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331538--00.html">http://www.michigan.gov/dnr/0,4570,7-153-30301_30505_33360_41834_68707-331538--00.html</a>.</p>
<p><b>9.3 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.</b></p>	<p>C</p>	
<p><b>9.3.a</b> 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>Regional management plans generally describe HCVs. Draft operational plans for ERAs were presented and reviewed and exceed the requirements of this indicator.</p> <p>Refer to OBS 2015.7 cited in C9.1.</p>
<p><b>9.3.b</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>Proposed and completed management activities in HCVFs were reviewed, including those associated with Rice Pond Pine Barrens, sink hole/high quality dry mesic forest and Natural Kirtland’s Warbler (KW) Scarification, and confirm that HCVs and extent are or will be enhanced through management activities.</p>
<p><b>9.3.c</b> If HCVF attributes cross ownership boundaries and where maintenance of the HCV attributes would be improved by coordinated management, then the forest owner or manager attempts to coordinate conservation efforts with adjacent landowners.</p>	<p>C</p>	<p>As confirmed through interviews with the Biodiversity and Conservation Program Leader, FME cooperates with a variety of adjacent landowner types in association with maintenance of HCV attributes including for example management and research of bat hibernacula, piping plover habitat and KW management.</p>
<p><b>9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.</b></p>	<p>C</p>	
<p><b>9.4.a</b> The forest owner or manager monitors, or participates in a program to annually monitor, the status of the specific HCV attributes, including the effectiveness of the measures employed for their maintenance or enhancement. The monitoring program is designed and implemented consistent with the requirements of Principle 8.</p>	<p>C</p>	<p>Natural community surveys are being conducted by MNFI in FY 2015 for the Werner Creek and La Vasseur Creek Dedicated Habitat Areas in the Gwinn State Forest, the Baraga Plains Pine Barrens in the Baraga State Forest, the Swede Road Quarry Limestone Bedrock Glade, the Boreal #7 Boreal Forest and the Compartment 203 Limestone Bedrock in the Sault Ste. Marie State Forest, the Carpenter Creek North and South Oak Pine Barrens in the Traverse State Forest, the Little Bear Lake Barrens in the Gaylord State Forest, and the Pere Cheney Railroad Pine Barrens in the Grayling FMU. Examples visited and/or noted in documentation during the audit include: Cudlip acquisition in the Gaylord State Forest, the Thies acquisition and the proposed Grindstone Creek Dedicated</p>

		<p>Habitat Area in the Pigeon River Country State Forest, proposed Betsie River Dedicated Habitat Area in the Traverse City State Forest and the Big Bass Lake Pine Barrens in the Gaylord State Forest. An annual report of these surveys will be provided to the DNR, which will describe additional element occurrence records added to the Natural Heritage database. About ten percent of HCVA's are also examined by FME's field staff each year as part of the compartment review process.</p> <p>For road-less areas (HCV3), monitoring activities are sufficient to capture the current status. Existing risks to any HCVs include the spread of non-native invasive species, according to document reviewed and interviews with FME staff.</p>
<p><b>9.4.b</b> When monitoring results indicate increasing risk to a specific HCV attribute, the forest owner/manager re-evaluates the measures taken to maintain or enhance that attribute, and adjusts the management measures in an effort to reverse the trend.</p>	<p>C</p>	<p>New risks to HCV attributes have not been identified. As confirmed through interviews and document review, existing risks include the spreading of invasive species.</p>
<p><b>Principle #10: 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.</b></p> <p>Per an examination of forest species composition and FME's management practices, SCS has determined that the FME's management system consists entirely of natural/ semi-natural forest management. Thus, Principle 10 does not apply.</p>		

## Appendix 6 – Tracking, Tracing and Identification of Certified Products

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

REQUIREMENT	C/NC	COMMENT/CAR
<p><b>1. Quality Management</b></p>		
<p>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.</p>	<p>C</p>	<p>Overall authority lies with the Certification Coordinator, David Price. Since timber sale administration is conducted at the level of each state forest, responsibilities are defined per job titles, which frequently are duplicated throughout the state forest system.</p>

<p>1.2 The FME shall maintain complete records of all FSC-related COC activities, including sales and training, for at least 5 years.</p>	<p>C</p>	<p>Training records were examined for Timber Sale Administration (COC) during an online demonstration in Lansing. Per work instructions and <a href="#">Michigan records retention regulations</a>, timber sale contracts include all pre-harvest volumes and are saved for at least seven years.</p>
<p>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></p>	<p>C</p>	<p><b>Stump</b>  <input checked="" type="checkbox"/> <i>Stumpage sale or sales of standing timber; transfer of ownership of certified-forest product occurs upon harvest.</i></p> <p><b>On-site concentration yard</b>  <input type="checkbox"/> <i>Transfer of ownership of certified-product occurs at concentration yard under control of FME.</i></p> <p><b>Off-site Mill/Log Yard</b>  <input type="checkbox"/> <i>Transfer of ownership occurs when certified-product is unloaded at purchaser’s facility.</i></p> <p><b>Auction house/ Brokerage</b>  <input type="checkbox"/> <i>Transfer of ownership occurs at a government-run or private auction house/ brokerage.</i></p> <p><b>Lump-sum sale/ Per Unit/ Pre-Paid Agreement</b>  <input checked="" type="checkbox"/> <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><b>Log landing</b>  <input type="checkbox"/> <i>Transfer of ownership of certified-product occurs at landing/yarding areas.</i></p> <p><input type="checkbox"/> <b>Other (Please describe):</b></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>There is no risk of mixing since FME only makes sales of standing timber through stumpage or lump-sum sales, which means that the purchaser takes legal possession prior to the transport of harvested materials and is therefore responsible for maintaining the chain of custody.</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.</p> <p><i>NOTE: This does not apply to log cutting or de-barking units, small portable sawmills or on-site processing of chips/biomass originating from the FMU under evaluation.</i></p>	<p>C</p>	<p>No processing occurs prior to the transfer of ownership.</p>
<p><b>2. Product Control, Sales and Delivery</b></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>Stumpage purchasers shall be notified that under FSC's Chain of Custody standards they may be required to show evidence that their wood comes from a certified source. This notice is included in timber sale contracts; upon severance from the stump, all COC procedures become the responsibility of the purchaser.</p>
<p>2.2 The FME shall maintain records of quantities/volumes of FSC-certified product(s).</p>	<p>C</p>	<p>FME maintains records of all pre-harvest volumes of timber products. All are sold as certified regardless of whether or not the purchaser maintains COC.</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"> <li>a) name and contact details of the organization;</li> <li>b) name and address of the customer;</li> <li>c) date when the document was issued;</li> <li>d) description of the product;</li> <li>e) quantity of the products sold;</li> <li>f) the organization's FSC Forest Management (FM/COC) or FSC Controlled Wood (CW/FM) code;</li> <li>g) clear indication of the FSC claim for each product item or the total products as follows: <ul style="list-style-type: none"> <li>i. the claim "FSC 100%" for products from FSC 100% product groups;</li> <li>ii. the claim "FSC Controlled Wood" for products from FSC Controlled Wood product groups.</li> </ul> </li> <li>h) If separate transport documents are issued, information sufficient to link the sales document and related transport documentation to each other.</li> </ul>	<p>C</p>	<p>The State Forest Timber Sale Contract template includes all information a)-g). Items f) and g) are explicitly addressed in clause 7.10.</p> <p>A sample of three timber sale contracts were examined and found to be conformant:  Sale 020 14 01 dated 1/23/2015  Sale 022 14 01 dated 5/27/2015  Sale 092 13 01 dated 4/15/2014</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. <b>Note: 2.3 and 2.4 above are based on FSC-STD-40-004 V2-1 Clause 6.1.1 and 6.1.2</b></p>	<p>NA</p>	<p>FME does not issue delivery documents (trip tickets); COC procedures become the responsibility of the purchaser upon severance of timber from the stump.</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"> <li>a) There is no risk that the customer will misinterpret which products are or are not FSC certified in the document;</li> <li>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;</li> <li>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.</li> </ul> <p><i>FSC-ADVICE-40-004-05</i></p>	<p>NA</p>	<p>No delivery documents used.</p>
<p><b>3. Labeling and Promotion</b> <span style="float: right;"><input type="checkbox"/> n/a</span></p>		
<p>3.1 Describe where/how the organization uses the SCS and FSC trademarks for promotion.</p>	<p>C</p>	<p>FME uses the FSC logo on its website. A new “Logging Congress Fact Card” was produced in 2015.</p>
<p>3.2 The FME shall request authorization from SCS to use the FSC on-product labels and/or FSC trademarks for promotional use.</p>	<p>C</p>	<p>FME requested new authorization on September 25, 2014 and has received approval for current logo use (SCS case 124450). The Logging Congress publication was reviewed and approved under SCS case 139091 date 8/5/2015.</p>

<p>3.3 Records of SCS and/or FSC trademark use authorizations shall be made available upon request.</p>	<p>C</p>	<p>FME utilizes the SCS online database for FSC trademark approvals. The organization provided the auditor with a PDF copy of the database history file.</p>
<p><b>4. Outsourcing</b></p>		<p><input checked="" type="checkbox"/> n/a</p>
<p>4.1 The FME shall provide the names and contact details of all outsourced service providers.</p>		
<p>4.2 The FME shall have a control system for the outsourced process which ensures that:</p> <ul style="list-style-type: none"> <li>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;</li> <li>b) The outsourcer keeps records of FSC-certified material covered under the outsourcing agreement;</li> <li>c) The FME issues the final invoice for the processed or produced FSC-certified material following outsourcing;</li> <li>d) The outsourcer only uses FSC trademarks on products covered by the scope of the outsourcing agreement and not for promotional use.</li> </ul>		
<p><b>5. Training and/or Communication Strategies</b></p>		
<p>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.</p>	<p>C</p>	<p>COC is addressed in Section 3 of DNR Forest Certification Work Instruction 7.2:  <a href="http://www.michigan.gov/documents/7_133228_7.2.pdf">http://www.michigan.gov/documents/7_133228_7.2.pdf</a>.                      All FME staff involved in timber sale administration have been trained in contract administration and the use of timber sale templates that contain FME's FSC code and claim (see 1.2).</p>
<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>See 1.2. Each staff member maintains his or her own training records, which are then summarized for certification. Work Instruction 7.2 cited above was updated in 2015. Contract administration trainings are held on an as-needed basis, the next scheduled for Feb 2016. As the burden of maintaining COC largely lies with the buyer since FME uses contract templates with the required information, current COC training and guidance is sufficient to prevent any breaks in COC while timber is under FME's responsibility.</p>

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

NA – recertification.