

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

*Indiana Department of Natural Resources,  
Division of Forestry, State Forest Properties*  
Indiana, USA

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CERTIFIED	EXPIRATION
11/Jul/2012	10/Jul/2017

DATE OF FIELD AUDIT
15-17/October/2014
DATE OF LAST UPDATE
09/January/2015

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## Foreword

Cycle in annual surveillance audits			
<input type="checkbox"/> 1 <sup>st</sup> annual audit	<input type="checkbox"/> 2 <sup>nd</sup> annual audit	<input checked="" type="checkbox"/> 3 <sup>rd</sup> annual audit	<input type="checkbox"/> 4 <sup>th</sup> annual audit
Name of Forest Management Enterprise (FME) and abbreviation used in this report:			
Indiana Department of Natural Resources, Division of Forestry, State Forest Properties (DoF)			

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

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

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

### Organization of the Report

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the 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 90 days after completion of the on-site audit. Section B contains more detailed results and information for the use by the FME.

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## SECTION A – PUBLIC SUMMARY

### 1. General Information

#### 1.1 Annual Audit Team

<b>Auditor Name:</b>	Dave Wager	<b>Auditor role:</b>	Lead Auditor
<p><b>Qualifications:</b> As previous FM Director for SCS, Dave spent ten years managing and/or leading Forest Stewardship Council (FSC) endorsed certification assessments on more than 100 forest management operations covering over 25 million acres of forestland across 16 countries. As a certification practitioner, Dave Wager has led FSC forest management and chain-of-custody assessments on a range of private and public operations across North America, Asia, and Latin America. In other natural resources work, Dave played a key role in the development of Starbucks CAFE Practices- a program to ensure procurement of sustainably grown and processed coffee. Dave has 17 years’ experience working in forestry and the environmental field. He has expertise in forest ecology and business (B.S. Business, Skidmore College; M.S. Forest Resources, Utah State University). While studying forest ecology at Utah State University, Dave was awarded a NASA Graduate Student Research Fellowship to develop dendrochronological techniques to assess Douglas-fir growth in Utah’s Central Wasatch Mountains.</p>			
<b>Auditor Name:</b>	Mike Ferrucci	<b>Auditor role:</b>	FSC Auditor
<p><b>Qualifications:</b> Mike Ferrucci is the former SFI Program Manager for NSF – International Strategic Registrations. He is qualified as a RAB-QSA Lead Auditor (ISO 14001 Environmental Management Systems), as an SFI Lead Auditor for Forest Management, Procurement, and Chain of Custody, as an FSC Lead Auditor Forest Management and Chain of Custody, as a Tree Farm Group Certification Lead Auditor, and as a GHG Lead Auditor. Mike has led Sustainable Forest Initiative (SFI) certification and precertification reviews throughout the United States. He has also led or participated in joint SFI and Forest Stewardship Council (FSC) certification projects in nearly one dozen states and a joint scoping or precertification gap-analysis project on tribal lands throughout the United States. He also co-led the pioneering pilot dual evaluation of the Lakeview Stewardship Unit on the Fremont-Winema National Forest.</p> <p>Mike Ferrucci has 30 years of forest management experience. His expertise is in sustainable forest management planning; in certification of forests as sustainably managed; in the application of easements for large-scale working forests, and in the ecology, silviculture, and management of mixed species forests, with an emphasis on regeneration and management of native hardwood species. Mike has conducted or participated in assessments of forest management operations throughout the United States, with field experience in 4 countries and 30 states. Mike has been a member of the Society of American Foresters for over 30 years. Mike is also a Lecturer at the Yale School of Forestry and Environmental Studies, where he has taught graduate courses and workshops in forest management, operations, professional forest ethics, private forestry, and financial analysis.</p>			

#### 1.2 Total Time Spent on Evaluation

A. Number of days spent on-site assessing the applicant:	3
B. Number of auditors participating in on-site evaluation:	3
C. Additional days spent on preparation, stakeholder consultation, and post-site follow-up:	0
<b>D. Total number of person days used in evaluation:</b>	<b>9</b>

## 1.3 Standards Employed

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

## 2 Annual Audit Dates and Activities

### 2.1 Annual Audit Itinerary and Activities

#### October 14, 2014 – Indiana State Forestry Offices

Opening meeting, employee interviews, and document review

#### October 15, 2014, Jackson-Washington State Forest

Site 1 Compartment 1, Tract 10. Stilt grass control from below dam along creek where one treatment was conducted with Post applied via ATV-mounted foliage sprayer. Did not treat close to drainage. This is the first treatment of an expected series. Did not use glyphosate so that there would remain some vegetation along the stream.

Site 2 Trail #4. A walking trail with signs, trail markers, footbridges, and a well-maintained walkway. A project has begun to upgrade a portion of this trail as a loop that is ADA-compliant for wheelchair access.

Site 3 Compartment not known. Completed harvest near Trail #2, reviewed status of regeneration in openings that were created as part of a timber harvest with follow-up TSI completed three years ago. Observed some oak seedlings expected to survive and many other hardwood species including taller tulip-poplar, confirming adequate and thrifty natural regeneration.

Site 4 Compartment 3, Tract 37. Selection harvest with scattered patch regeneration openings completed in 2012 with post-harvest TSI also completed. Openings targeted removal of post-agricultural planted non-native pine.

Site 5, Forestry Education Center, Starve Hollow State Recreation Area. A well-provisioned nature center with live reptiles and ample evidence of a thriving program.

Site 6 Completed timber sale viewed from Mail Route Road. Confirmed good attention to visual management issues.

Site 7 Compartment 9, Tracts 14 & 28. Active harvest on large sale with nearly 700 mbf and over 300 cords sold. Due to wet ground conditions and rain on the day of the visit by the auditors the logging equipment was parked. Several cutting blocks and associated skid trails and much of the haul road being used were assessed and found to be holding up. Water bars are well-constructed and the deep mixture of yarding equipment (crawler dozer, rubber-tired skidder and rubber-tired grapple skidder, all with cable winches) has been effectively deployed to minimize site impacts on the steep terrain. Logger interviews completed by phone while on this site.

Site 8 Indian Bitter (Cucumber tree) State Natural Area. 35-acre site dedicated 2.21.86.

Site 9 Mail Route Access Road. This access road is open to the public all year and is maintained by Indiana Division of Forestry. Some drainage issues were pointed out by the resource forester, with repairs scheduled for next week using Indiana Division of Forestry equipment and operator.

Site 10 Walked through four different tracts of Back Country Area (BCA) along Knobstone Trail. Tracts visited had been harvested in 2004, 1992, 1971, and 1978. Also walked along two tracts that had no record of harvest. All harvest areas had been treated with improvement thinnings and no regeneration openings were created. According to DoF staff, this Back Country Area was originally set-aside because its size and location fit with the desire to have an area for remote site camping. It was not selected based on any ecological uniqueness and area walked through did not appear to have any unique ecological features. This BCA was a mature secondary forest similar to much of the forest on Jackson-Washington State Forest. Interviewed backpacker on the trail as he or she was hiking the approximate 58 mile trail.

Site 11 Compartment 10, Tract 16. 144 acre improvement thinning (single tree selection) in BCA. Timber sale setup in 2011 and harvested in 2013. Confirmed that no regeneration openings were created in harvest area. Approximately 37% (332,000 bf) of the standing volume (900,000 bf) was harvested. 217 cull trees were listed in the harvest tally. There was some residual stand damage and penalties were assessed to the logger. Water bars were well constructed and were serving intended purpose.

Site 12 (Tucker) Compartment 11, Tracts 3 & 4. Minimal skid trails, minimal damage to residual stands, and water bars meet BMPs. The log yard is clean of fluids and trash and was smoothed and leveled prior to closure of tract. TSI will be the next operation.

### **October 16, 2014, Ferdinand –Pike State Forest**

Site 1 Regeneration and shelterwood cut adjacent to Ferdinand-Pike office. Harvested in 2011. Abundant regeneration dominated by tulip poplar. Prescribed fire to promote oak had not accomplished objective of releasing underplanted oak.

Site 2 Ferdinand Compartment 2, Tract 4. 142 acre tract of mixed hardwood. 113 acre improvement thinning with five regeneration openings. The one regeneration opening inspected was successfully regenerated. No rutting or residual stand damage observed. Removal of approximately 2,600 bf per acre. Remnants of a historic homesite were protected from equipment. TSI completed in March 2013. Tract had recreation opportunities for mountain biking and disabled hunters.

Site 3 Fire Lane 1 Annually mowed and graded, when staff resources allow. Fire lanes are also used as disabled hunting trails.

Site 4 Fire tower. Open to public allows viewing of Ferdinand-Pike, Hoosier, and private forests. Small amount of trash is left by public, and DoF staff periodically clean it up.

Site 5 Ferdinand Compartment 3, Tract 2. Completed treatments on 53 acres, most of which is improvement thinning. There are 9 regeneration openings, 2 of non-native pine and 7 smaller

hardwood openings. Pine openings have ample regeneration and sufficient retention. Hardwood opening inspected has TSI pending.

Site 6 Compartment 3, Tracts 2, 3, 4, & 5. 322 acres of non-native pines and mixed hardwoods. 100 acres of patch clearcuts and improvement thinning. Invasive plant treatment of forester spraying multi-flora rose with Roundup prior to harvest. Additional invasive control is scheduled to be done through a post TSI harvest contract. Three large regeneration openings, with two of them requiring retention patches of 5% due to size being over 20 acres. Forester and wildlife biologist communicated to determine and implement appropriate retention patches, which were mapped and painted prior to harvest. Additional peninsula added to Tract 3 to protect ephemeral drainage. Erosion problem on fire lane that was used to access harvest blocks. Soils with high susceptibility to erosion along with ineffective drainage controls resulted in several areas of road washout. Most significant area was a 250 ft long moderate washout that emptied into a very small potential wetland. Fire lanes are typically maintained annually but this had been deferred due to higher priority facility maintenance needs at property headquarters.

Site 7 Ferdinand, Compartment 3, Tract 4. Small timber harvest by Fire Headquarters operators removing white pines for special project. Initial water bars not fully functional, but sedimentation into perennial stream prevented by fiber erosion matting.

Site 8 CCC shelter and campground site. Nice example of the recreation facilities available at Ferdinand - Pike. New vault toilets added in 2013. Future plans include primitive camping cabins.

Site 9 (Tucker) Ferdinand Compartment 1, Tracts 10. Marking sale in Ferdinand State Forest. Salvage sale of pine, Improvement cut of hardwood, Blended timber sale marking with mountain bike trail.

Site 10 (Tucker) Pike Compartment 11, Tracts 2, 3, 4. Salvage of blown down pine and intermediate cut of hardwood. Good utilization. Monitoring for hardwood natural regeneration. Cultural sites identified on ground and tagged and mapped in GIS. Debris used to stabilize yard and skid trails. Water bars implemented on tract. Camping area will be closed during harvesting.

Site 11 (Tucker) Pike Compartment 8, Tracts 6 & 8. Harvest pine with intermediate harvest of hardwood. Boundary line freshly painted. Low water crossings on access. Plan for additional rock when using. Yard is abandoned F & W food plot. Cultural site – Home site – marked with 100' buffer. Will be reflagged prior to harvesting. Pine in opening sold by inventory. 3 pine areas (5.4 acres, 5.0 acres, 6.4 acres). Hardwood marked for improvement.

#### **October 17, 2014, Martin State Forest**

Site 1 State Forest Fire Lane #12. Forest access road with gravel surface, crown, ditches, and ditch-relief culverts built to high standards. Maintained by state forest staff using Bobcat, with annual mowing and spot repairs the normal approach. The spot repairs in 2014 have been delayed due to staff shortages and other priorities, and mowing intervals are longer than in the past. Despite this the road is holding up well. Road is gated but disabled hunters are allowed access on request. Side or branch fire lanes are not built to the same standard so they are gated without similar provisions for disabled hunters.

Site 2 Compartment 4, Tracts 9, 2, and 8. Marked 331 acres and sold but not harvested yet. Silvicultural prescription is mostly improvement thinning with some regeneration openings. Inspected one opening which has received pre-harvest TSI in the form of girdling unmerchantable pole size trees.

Site 3 Compartment 4. Stand was burned 4 years ago and then a shelterwood seed-tree harvest was done. Adequate regeneration, defined as more than 1,000 trees per acres, apparent, with some oaks. Biologist stated that this treatment approach when monitored in other locations has shown to be desirable for bats, likely because it emulates a very common forest structure when the historic disturbance fire regime was in place.

Site 4 Compartment 1, Tracts 1, 11, 14, active harvest site but loggers were not present due to wet conditions. 2 sales: 187-acre selection tract with a pine regeneration opening; salvage sale added later. Some rutting was observed, linked to change in time of year for harvesting dictated by the recent bat management guidelines.

Site 5 Compartment 1, Tract 11. Sale layout reviewed; 52 acres of pine salvage regeneration openings with some areas of selection harvesting around the stream.

Site 6 Compartment 1, Tracts 9 & 10 Approximate boundaries noted. No issues. Intermediate harvest of hardwood with openings. Opening has retention trees. Good reproduction found in site. No damage to residual stand. Good utilization. No issues identified on site.

## 2.2 Evaluation of Management Systems

SCS conducted the audit from October 13-15, 2014 with an audit team comprised of Dave Wager (lead auditor) and Mike Ferrucci (team forester). The process included the assembly and review of audit evidence consisting of documents, interviews, and on-site inspections of ongoing or completed forest practices. Documents describing these activities and lists of management activities were provided to the auditors during the audit, and a sample of the available field sites was selected by the audit team for review. The selection of field sites for inspection was based upon the risk of environmental impact, special features, past non-conformances/observations, and other factors. During the audit, the audit team reviewed a sample of the available written documentation as objective evidence of FSC conformance. Documents that were reviewed during this audit included management plans, procedures, timber sale inspection forms, chemical use records, responses to corrective action requests, among other policies, procedures and records.

## 3. Changes in Management Practices

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



## 4. Results of the Evaluation

### 4.1 Existing Corrective Action Requests and Observations

<b>Finding Number: 2013.01</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>	6.3.h.
<p><b>Background:</b> Indicator 6.3.h requires the forest manager to implement management practices that minimize the risk of invasive establishment, growth, and spread. DoF implements many activities consistent with meeting the requirements for invasive species control and prevention. However, the following evidence supports issuing an opportunity to improve overall conformance with 6.3.h:</p> <ol style="list-style-type: none"> <li>DoF is not systematically undertaking efforts to minimize spread of Japanese stiltgrass on recreation or management trails. Auditors observed stiltgrass spreading from fire lane access roads onto skid trails (e.g., Morgan Monroe T. 10-15). Efforts such as harvest timing or using seed mixes that are more competitive against stiltgrass may have merit and are not currently being used systematically.</li> <li>In 2011 DoF committed to putting information about invasive plant species at trailhead kiosks. At the time of the 2013 audit, trailhead kiosks were lacking such information.</li> </ol>	
<b>Observation</b>	DoF should consider additional measures to minimize the risk of invasive establishment, growth, and spread.
<b>FME response</b> <i>(including any evidence submitted)</i>	<p>The DoF has undertaken the following additional measures:</p> <ol style="list-style-type: none"> <li>Placing additional information in property offices and kiosks to inform property visitors/users of invasive species and recreational use vector.</li> <li>Conducted system wide stilt grass training in July 2014</li> <li>Undertook stilt grass control project at each State Forest (except Clark) in July-August 2014</li> <li>Include invasive species control in forest restoration contracts</li> <li>Include invasive species check as part of regeneration monitoring</li> <li>Periodically include invasive species info in property newsletters</li> <li>Allow exception to fescue use restriction as potential means to control stilt grass establishment.</li> </ol>
<b>SCS review</b>	SCS auditor verified that the actions described above are occurring. Auditor verified invasive species information available to the public at property offices on Jackson-Washington State Forest and Ferdinand-Pike State Forest. A stilt grass control project was inspected outside of the Jackson-Washington office.
<b>Status of CAR:</b>	<input checked="" type="checkbox"/> Closed <input type="checkbox"/> Upgraded to Major <input type="checkbox"/> Other decision <i>(refer to description above)</i>

<b>Finding Number: 2013.02</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>	6.5.c
<p><b>Background:</b> Indicator 6.5.c requires that “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.” The following findings supports an opportunity to improve conformance with this Indicator:</p> <ol style="list-style-type: none"> <li>1. One site visited during the audit had areas with rutting on secondary skid trails that appeared sufficient to impact the roots of trees and soil properties (Owen Putnam Compartment 7, Tract 4). The operations were stopped by the DoF sale administrator before further damage occurred.</li> <li>2. One site visited during the audit had significant tree damage to primarily post and pole size trees along main skid trails and some isolated damage along secondary skid trial (Morgan Monroe Compartment 19, Tracts 1 and 2 ).</li> </ol>	
<b>Observation</b>	DoF should consider implementing additional training, logging contractor incentives, or other measures to improve conformance with 6.5.c.
<b>FME response</b> <i>(including any evidence submitted)</i>	-State Forest procedures have been adopted to incentivize loggers to minimize residual damaged and rutting. The procedure increases timber sale contract damage deposits required from entities not adhering to contract provisions. -State Forest foresters participate in periodic outside BMP reviews, which provide valued OJT to increase subject awareness. - This subject is considered during harvest inspections and documented on the ‘Forester’s Verification of a Timber Sale Completion’ form completed at time of harvest completion.
<b>SCS review</b>	SCS auditor verified that the actions described above are occurring. SCS auditors observed good conformance with BMP implementation across nearly all sites visited during 2014 audit. One isolated exception, Ferdinand – Pike SF, Site #6 C 3 - T 2, 3, 4, & 5, led to issuance of a new Observation.
<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: 2013.03</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>	6.3.a.1
<p><b>Background:</b> Indicator 6.3.a.1 requires the forest manager to “maintain, enhance, and/or restores under-represented successional stages. Where old growth of different community types that would naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance and/or restore old growth characteristics.”</p> <p>As described in response to CAR 2011.4, DoF has committed to managing approximately 6550 acres of Back Country Areas (BCA) to develop into a late seral condition. As confirmed during the audit, practices of long rotations and lower intensity single tree selection harvests are moving stands to a late seral condition. However, the written guidance for managing BCAs is lacking a provision that ensures some over-mature trees are retained as part of the selection harvests. The audit did not uncover any BCAs that were lacking in over-mature trees, but it must be ensured that written procedures are consistent with management objectives for late seral conditions.</p>	
<b>Observation</b>	DoF should revise procedures to reflect and ensure that some over-mature trees are retained in BCAs and other areas designated for meeting the objectives of late seral conditions.
<b>FME response</b> (including any evidence submitted)	<p>The following statement will be added to State Forest procedures regarding management of backcountry areas: <i>“Timber management in backcountry areas can continue, but with modifications. A goal is to maintain a relatively contiguous canopy; therefore, regeneration openings will not be created. The only exception to this is for catastrophic situations, such as storm salvage. A goal will be to develop an older forest structure than is created through standard management. Therefore, selection of trees to be removed will be more conservative than standard. Trees should be selected in such a way as to have removals up to 40% less than would be selected under typical management. This is to increase the speed of site and canopy recovery to pre-harvest conditions. Management entry cycles will be lengthened from typical state forest tracts by up to 50% to and allow for development of older forest conditions. The intent is to create stand conditions with reduced management related visual impacts than in typical tracts and management which allows for more natural mortality of medium and large diameter trees. Cull trees larger than 19” DBH should not be targeted for removal during a harvest unless their removal benefits felling of other harvest trees (creates felling lanes), the logistics of the operation (removal of harvested trees – landings, skidtrails, haul roads), or for safety. These larger cull trees, if to be removed from the stand for reasons other than the above, should be deadened as TSI measures. The other areas designated for meeting late seral objectives are primarily set aside as Nature Preserves and not subject to commercial timber harvests.”</i></p>
<b>SCS review</b>	SCS auditor verified that a BCA late seral silvicultural training occurred on October

	<p>9, 2014. The Procedures Manual has been updated to include a written strategy for encouraging late seral forest type with the BCA. Key elements of the procedure include:</p> <ul style="list-style-type: none"> <li>- No regeneration openings within a BCA (exceptions may be made for catastrophic salvage)</li> <li>- Trees are to be selected in such a way as to have removals up to 40% less than would be selected under typical management. This is to increase the speed of site and canopy recovery to pre-harvest conditions.</li> <li>- Management entry cycles will be lengthened from typical state forest tracts by up to 50% to and allow for development of older forest conditions. The intent is to create stand conditions with reduced management related visual impacts than in typical tracts and management which allows for more natural mortality of medium and large diameter trees.</li> </ul>
<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 New 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): none
<b>FSC Indicator:</b>	FSC-US Forest Management Standard 6.5.c
<b>Background</b> (or Background/ Justification in the case of Observations): Indicator 6.5.c requires that “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.” The DoF rutting guidelines designed to protect soil resources allow for continued hauling and skidding as long as the ruts can be smoothed so that they do not exceed 18” in depth. This guideline alone may not be effective at preventing root damage, changes in hydrology, and compaction that often occur when ruts are being made. Smoothing of ruts does not alleviate the root damage, compaction, and changes to hydrology associated with rutting.	
<b>Corrective Action Request</b> (or Observation): DoF should consider implementing revised rutting guidance that better protects soil and water resources.	
<b>FME response</b> (including any evidence submitted)	

<b>SCS review</b>	
<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: 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 checked="" type="checkbox"/> Next audit (surveillance or re-evaluation) <input type="checkbox"/> Other deadline (specify): none
<b>FSC Indicator:</b>	FSC-US Forest Management Standard 7.2.a
<b>Background</b> (or Background/ Justification in the case of Observations): Indicator 7.2.a. requires that 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.” DoF is operating on year 6 of a 5 year Strategic Plan (2008-2013). DoF has not yet received approval from the administration to complete and begin implementing the draft plan (2014-2019) and is thus operating under default extension of the 2008-2013 plan. While the direction of the 2008-2013 is still largely relevant, the objectives related to acquisition are no longer applicable as overall funding for DoF has diminished and timber sale revenue is needed for general operations.	
<b>Corrective Action Request</b> (or Observation): If DoF is unable to finalize and implement the draft Strategic Plan (2014-2019), it should consider formally extending the current plan and notifying the public that they are operating under an extension of the five year that expired in 2013.	
<b>FME response</b> (including any evidence submitted)	
<b>SCS review</b>	
<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. Stakeholder Comments

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

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

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

### 5.1 Stakeholder Groups Consulted

Logging contractors	Environmental activist group
Recreation interest	

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

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

<input type="checkbox"/> FME has not received any stakeholder comments from interested parties as a result of stakeholder outreach activities during this annual audit.	
Stakeholder comments	SCS Response
<b>Economic concerns</b>	
No concerns	
<b>Social concerns</b>	
Interview with through hiker on Knobstone Trail in Backcountry Area. Minor concern regarding illegal dumping seen along the trail, but unsure if it was on State Forests. No concerns regarding timber harvest within Backcountry Area.	DoF takes action at preventing illegal dumping such as gating roads, marking boundaries, and working with Conservation Officers. The audit team did not uncover any significant problems with illegal dumping on State Forests during the 2014 audit.
<b>Environmental concerns</b>	
Concern about how IN DoF came up with the target for managing 10% of the State Forests toward a late seral condition. A related concern is that managing 10% toward late seral is not enough given that these are public lands.	As stated in the DoF Strategic Plan – “State Forests are managed toward a long term balance in forest stand age and structure with 10% of forest acreage in or developing older forest conditions (nature preserves and high

	<p>conservation forests) as well as 10% in early successional forests (0-20 years old).” This balance in stand age and structure was modeled after the bell shape curve. The FSC standard has no numeric targets for the percentage of “older forest conditions”. Ten percent is similar to other public forests in the Lake States Central Hardwood Region. Other public land managers within the State of Indiana (e.g., State Fish and Wildlife lands, Hoosier National Forest) are effectively managing much higher percentages and acreages toward late seral/late successional because only minor amounts of timber is harvested on these lands. DoF also can effectively manage larger, more contiguous tracts under early to mid-successional stages, which is consistent with meeting certain species recovery goals and acts as surrogate for pre-European settlement disturbance regimes.</p> <p>The audit team finds conformance with Indicator 6.3.a.1 given that the FSC standard lacks a numeric requirement, that the 10% target is significant and framed within an overall goal of balanced age class, and that other public lands within the State are contributing to increasing late seral/successional forests.</p>
<p>The state forests are not just there for logging, the primary management objectives should be for ecological restoration, not just saw timber.</p>	<p>As detailed in all of the FSC conformance tables over the eight years of this certificate, the audit team finds that State Forests are being managed for a diversity of timber, recreation, and ecological objectives.</p> <p>Ecological restoration also implies establishing a specific reference in time to restore something to and is thus open to much interpretation. If the objective is pre-European settlement conditions, then DoF’s uneven-aged management regime mimics the natural and anthropogenic fires that occurred during pre-European settlement.</p>
<p>DNR has not been responsive to their requests for information.</p>	<p>The SCS audit team is unsure of what requested documents were not provided. The audit team finds that a large number of planning documents and plans are made available on the DNR websites</p> <p><a href="http://www.in.gov/dnr/forestry/3635.htm">http://www.in.gov/dnr/forestry/3635.htm</a>  <a href="http://www.in.gov/dnr/forestry/3605.htm">http://www.in.gov/dnr/forestry/3605.htm</a></p>

<p>Most of the forest types throughout the state are in early successional phases, and so stating a goal for 10% early to match the 10% late is misleading.</p>	<p>Neither the U.S. Forest Service’s Forest Inventory nor Analysis or DoF’s CFI system support this comment. The lack of early seral forest habitat is part of the reason that the oak hickory forest types are in major decline as they are succeeding to maple beech forests. Although there are large acreages in agricultural landscapes, that is quite different than early seral <i>forest</i> habitat. The Hoosier National Forest is not creating early seral forest habitat nor are most non-industrial landowners. The State Forests are one of the only landowners creating early seral forest habitat.</p>
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## 6. Certification Decision

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

## 7. Changes in Certification Scope

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

### Name and Contact Information

<b>Organization name</b>	Indiana DNR, Division of Forestry		
<b>Contact person</b>	Brenda Huter		
<b>Address</b>	Indiana Department of Natural Resources Division of Forestry 402 W. Washington, Room W-296 Indianapolis, IN 46204 USA	<b>Telephone</b>	317-232-0142
		<b>Fax</b>	317-233-3863
		<b>e-mail</b>	bhuter@dnr.in.gov
		<b>Website</b>	<a href="http://www.in.gov/dnr/forestry">www.in.gov/dnr/forestry</a> <a href="http://www.inforestryx.com">www.inforestryx.com</a>

### FSC Sales Information

<b>FSC salesperson</b>	Same as above.		
<b>Address</b>		<b>Telephone</b>	
		<b>Fax</b>	
		<b>e-mail</b>	
		<b>Website</b>	



## Scope of Certificate

<b>Certificate Type</b>	<input checked="" type="checkbox"/> Single FMU		<input type="checkbox"/> Multiple FMU	
	<input type="checkbox"/> Group			
<b>SLIMF (if applicable)</b>	<input type="checkbox"/> Small SLIMF certificate		<input type="checkbox"/> Low intensity SLIMF certificate	
	<input type="checkbox"/> Group SLIMF certificate			
	N/A			
<b># Group Members (if applicable)</b>	N/A			
<b>Number of FMU's in scope of certificate</b>	N/A			
<b>Geographic location of non-SLIMF FMU(s)</b>	Latitude: W 86 degrees 10 minutes Longitude: N 39 degrees 46 minutes			
<b>Forest zone</b>	<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	157,800			
community managed	0			
<b>Number of FMUs in scope that are:</b>				
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	
<b>Total forest area in scope of certificate which is included in FMUs that:</b> 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			
<b>Division of FMUs into manageable units:</b>				
The Division of Forestry (DoF) is a unit of the Department of Natural Resources, a state agency within the executive branch of the Indiana state government. DoF divides the FMU into State Forests. Each State Forest is then divided into compartments and tracts that are the units upon which all forest management activities are based.				

## Production Forests

<b>Timber Forest Products</b>	<b>Units:</b> <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac
Total area of production forest (i.e. forest from which timber may be harvested)	157,800
Area of production forest classified as 'plantation'	0
Area of production forest regenerated primarily by replanting or by a combination of replanting and coppicing of the planted stems	23
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	626
<b>Silvicultural system(s)</b>	<b>Area under type of management</b>
Even-aged management	196
Clearcut (clearcut size range )	196

Shelterwood	0
Other:	0
Uneven-aged management	5,640
Individual tree selection	5,210
Group selection	430
Other:	
<input type="checkbox"/> Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	N/A
The sustainable rate of harvest (usually Annual Allowable Harvest or AAH where available) of commercial timber (m3 of round wood)	24,700,000 BF
<b>Non-timber Forest Products (NTFPs)</b>	
Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services	0
Other areas managed for NTFPs or services	0
Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type	0
<b>Explanation of the assumptions and reference to the data source upon which AAH and NTFP harvest rates estimates are based:</b>	
<b>Species in scope of joint FM/COC certificate: <i>Scientific/ Latin Name (Common/ Trade Name)</i></b>	
<p>Quercus spp. Oaks: white, red, black, scarlet, post, bur, swamp chestnut, swamp white, chestnut, chinkapin, shingle, black jack, cherry bark, pin, shumard</p> <p>Liriodendron tulipifera (yellow-poplar)</p> <p>Acer spp (Maple: sugar, red, black, silver, boxelder)</p> <p>Carya spp (Hickory: bitternut, mockernut, shagbark, red, pignut)</p> <p>Fraxinus spp. (Ash: white, green, pumpkin, black, blue)</p> <p>Pinus spp (Pine: white, red, Scotch, Virginia, shortleaf)</p> <p>Juniperus virginiana (red cedar)</p> <p>Sassafras albidum (sassafras)</p> <p>Plantanus occidentalis (sycamore)</p> <p>Liquidamber styraciflua (sweet gum)</p> <p>Ulmus spp. (elms)</p> <p>Celtis occidentalis (hackberry)</p> <p>Juglans nigra (black walnut)</p> <p>Fagus grandifolia (American beech)</p> <p>Tilia Americana (basswood)</p> <p>Populus spp. (large-toothed aspen, quaking aspen, cottonwood)</p> <p>Prunus serotina (black cherry)</p> <p>Gleditsia triacanthos (honey locust)</p> <p>Gymnocladus dioica (Kentucky coffee-tree)</p> <p>Robinia pseudoacacia (black locust)</p> <p>Nyssa sylvatica (black gum)</p> <p>Aesculus spp (Ohio, yellow)</p> <p>Catalpa speciosa (Catalpa)</p>	

**FSC Product Classification**

Timber products		
Product Level 1	Product Level 2	Species
W1 Rough Wood	W1.1 Roundwood	All
W1 Rough Wood	W1.2 Fuelwood	All
W3 Wood in chips or particles	W3.1 Wood chips	All
Non-Timber Forest Products		
Product Level 1	Product Level 2	Product Level 3 and Species

**Conservation Areas**

Total area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives		2018 ac		
High Conservation Value Forest/ Areas				
High Conservation Values present and respective areas:			Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac	
	Code	HCV Type	Description & Location	Area
<input checked="" type="checkbox"/>	HCV1	Forests or areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	Virginia Pine-Chestnut Oak, Clark SF, (19.4 A) Alum Cave Hollow, Clark SF, (164.2 A) Batwing Cave, Harrison-Crawford SF, (10.5 A) Deam’s Bluff, Harrison-Crawford SF, (251.9 A) Scout Ridge, Morgan-Monroe SF, (15.1 A) Crooked Creek, Yellowwood SF, (34.3 A)	495.4 ac
<input type="checkbox"/>	HCV2	Forests or areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.		
<input checked="" type="checkbox"/>	HCV3	Forests or areas that are in or contain rare, threatened or endangered ecosystems.	White Oak , Clark SF,(133.7 A) Post Oak-Cedar, Harrison-Crawford SF, (275.5 A); Scout Mountain, Harrison-Crawford SF, (47.7 A) Leavenworth Barrens, Harrison-Crawford SF, (747.5 A)	1873.5 ac

			Blue River Gravel Wash Barrens, Harrison-Crawford SF, (77.6 A) Indian Bitter, Jackson-Washington SF, (36.7 A) Knobstone Glades, Jackson-Washington SF, (58.8 A) Henshaw Bend, Martin SF, (82.5 A) Tank Spring, Martin SF, (62.9 A) Low Gap, Morgan-Monroe SF,(320 A) Miller Ridge, Yellowwood SF, (30.6 A)	
<input type="checkbox"/>	HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).		
<input type="checkbox"/>	HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).		
<input type="checkbox"/>	HCV6	Forests or areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).		
<b>Total Area of forest classified as 'High Conservation Value Forest/ Area'</b>				<b>2018 ac</b>

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

<input checked="" 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 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>		
<b>Control measures to prevent mixing of certified and non-certified product (C8.3):</b>		
<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 type="checkbox"/> ac)</b>

## 8. Annual Data Update

### 8.1 Social Information

Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):		
# of male workers 149	# of female workers 46	
Number of accidents in forest work since last audit:	Serious: # 2	Fatal: # 0

### 8.2 Annual Summary of Pesticide and Other Chemical Use

<input type="checkbox"/> FME does not use pesticides.				
Commercial name of pesticide / herbicide	Active ingredient	Quantity applied annually (kg or lbs)	Size of area treated during previous year	Reason for use
Aquapro, Roundup, Nufarm Credit Extra, Gly Star Plus; Drexel Imitator Plus; Razor; Mad Dog Plus, Buccaneer Plus, Buccaneer; Cornerstone, Rodeo	glyphosate	61.6 gallons	473.3	Invasive species control; general weed control; TSI
Poast, Poast Plus	sethoxydim	20.2 gallons	154.8	Invasive species control
Tordon RTU, Pathway	Picloram, 2,4D	13.9 gallons	831.5	TSI
Arsenal, Stalker	Imazapyr	14.9 gallons	8	TSI, Invasive species control
Element 4, Garlon 4, Element 3A	triclopyr	41.1 gallons	578.2	Right of way vegetation control; invasive species control, TSI, opening completion
Oust	sulfometron	0.1 gallon	8.5	Tree planting weed control
Cutrine Plus	copper chelate	78.9 gallons	125	Algae control
Navigate	2,4D (butoxyethyl ester)	100 lbs	1	Invasive species control
Fusion	Fluazifop-p-butyl Fenoxaprop -p-ethyl	0.5 gallon	3.2	Invasive species control
Aquathol K	endothall	12.5 gallons	3.5	Removal of naiads



## SECTION B – APPENDICES (CONFIDENTIAL)

### Appendix 1 – List of FMUs Selected For Evaluation

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

### Appendix 2 – List of Stakeholders Consulted

#### List of FME Staff Consulted

Brenda Huter, Forest Certification Coordinator, Indiana Division of Forestry  
 John Seifert, State Forester, Indiana Division of Forestry  
 Dan Ernst, Assistant State Forester, Indiana Division of Forestry  
 John Friedrich, Property Specialist, Indiana Division of Forestry  
 Scott Haulton, Forestry Wildlife Specialist, Indiana Division of Forestry  
 AJ Ariens, Forestry Archaeologist, Indiana Division of Forestry  
 Jamie Winner, Property Manager, Ferdinand – Pike State Forest  
 Amanda Smith, Resource Specialist, Ferdinand – Pike State Forest  
 Jim Lauck, Property Manager, Martin State Forest  
 Joshua Kush, Resource Specialist, Martin State Forest  
 Brad Schneck, Property Manager, Jackson-Washington State Forest  
 Derrick Potts, Resource Specialist, Jackson-Washington State Forest  
 Sandy Derringer, Naturalist/Resource Specialist, Jackson-Washington State Forest  
 Duane A. McCoy, Forest Hydrologist, Indiana Division of Forestry  
 John Bacone, Director, Division of Nature Preserves  
 Dale Brier, Streams and Trails Section Chief, Indiana Division of Outdoor Recreation

All contact information is available via Indiana DNR directory.

#### List of other Stakeholders Consulted

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.
Jeff Stant	Indiana Forest Alliance	NA	Phone	yes
Danny Richards –	Commiskey Hardwood	NA	Phone	No
Billy Trueblood	Trueblood Logging	NA	Phone	No
Kaleb Staton	NA	NA	Field	No

### Appendix 3 – Additional Audit Techniques Employed

None.

### Appendix 4 – Pesticide Derogations

<input checked="" type="checkbox"/> There are no active pesticide derogations for this FME.		
<b>Name of pesticide / herbicide (active ingredient)</b>		<b>Date derogation approved</b>
<b>Condition</b>	<b>Conformance (C / NC)</b>	<b>Evidence of progress</b>

### Appendix 5 – Detailed Observations

Evaluation Year	FSC P&C Reviewed
2011	All – (Re)certification Evaluation
2012	1.5, 2.3, 3.2, 4.2, 4.4, 5.6, 6.2, 6.3, 8.2, 9.4
2013	1.1-1.6, 2.3, 3.2, 4.2, 4.4, 5.3, 5.6, 6.1-6.10, 9.4
2014	1.5, P.2, 3.2, 4.2, 4.4, P.5, 6.2, 6.3, 6.9 P.7, 8.2, 9.4
20XX	

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

REQUIREMENT	C/NC	COMMENT/CAR
<b>P1 Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.</b>		
<b>C1.1 Forest management shall respect all national and local laws and administrative requirements.</b>	NE	
<b>C1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.</b>	C	
1.5.a. The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the <b>Forest Management Unit</b> (FMU).	C	There is ample evidence of conformance with 1.5.a. including: <ul style="list-style-type: none"> <li>• Active marking of property boundaries with all boundaries painted approximately every 5 years. For properties where boundary is uncertain, DoF works with surveyor to establish boundary.</li> <li>• DoF gates access roads</li> <li>• ATV's are prohibited on State Forests.</li> <li>• DoF maintains a "good neighbor database" and invites the public to yearly open houses</li> <li>• DoF maintains a close working relationship with Law Enforcement.</li> <li>• DoF does a good job posting state forest regulations and trail closures.</li> </ul> Through interviews, document review, and field



		inspection confirmed all of the above occurring on Jackson-Washington, Ferdinand-Pike, and Martin State Forests.
1.5.b. If illegal or unauthorized activities occur, the forest owner or manager implements actions designed to curtail such activities and correct the situation to the extent possible for meeting all land management objectives with consideration of available resources.	C	DoF works closely with law enforcement officers to curtail illegal activities. No signs of significant illegal activities were found at the sites visited during the 2014 audit. Confirmed there was a ginseng arrest on Martin State Forest by Conservation Officers. No ATV activity was observed during the assessment. DoF attempts to deal with unauthorized horse trails by hindering entrances to them and repairing existing authorized trails.
<b>P2 Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.</b>		
<b>C2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.</b>	C	
2.1.a. The forest owner or manager provides clear evidence of <i>long-term</i> rights to use and manage the FMU for the purposes described in the management plan.	C	DoF was established through legislation in the 1920s. The ownership of State Forests can be verified through county records and at the central office. DoF tracks legal ownership through State Land Office with online GIS mapping system and deed links for each parcel. Internally, DoF has a managed-land database that the general public does not see.
2.1.b. The forest owner or manager identifies and documents legally established use and access rights associated with the FMU that are held by other parties.	C	Lease agreements are maintained at the DoF Central Office and are the responsibility of John Friedrich. On previous visits to Central Office SCS auditors have found lease agreements to be well documented.
2.1.c. Boundaries of land ownership and use rights are clearly identified on the ground and on maps prior to commencing management activities in the vicinity of the boundaries.	C	DoF is taking significant actions to reduce the risk of unauthorized activities by periodically (5 years) reviewing all property boundaries which may include repainting or marking of lines. DoF maps include property boundaries and information on other use rights (e.g., rights-of-way). These maps are prepared during the planning phase prior to timber sales and other contracted management activities going out to bid.  Timber sales visited in 2014 audit with external boundaries were marked.
<b>C2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.</b>	C	
2.2.a. The forest owner or manager allows the exercise of <i>tenure</i> and <i>use rights</i> allowable by law or	C	Tenure and use rights are well respected by DoF.

regulation.		Customary recreational uses are accommodated and managed in an exemplary manner. Observed numerous examples of recreational uses being promoted. See section 2.1.
2.2.b. In FMUs where tenure or use rights held by others exist, the forest owner or manager consults with groups that hold such rights so that management activities do not significantly impact the uses or benefits of such rights.	C	<p>The primary mechanism for consulting with concerned and affected stakeholders is an annual open house.</p> <p>Good neighbor letters are sent prior to timber harvests. Confirmed for Compartment 8 Tract 3 on Jackson-Washington State Forest.</p> <p>Considerable efforts are made to get attendance at the open house, such as drawings, free food, free saplings, and education. Manager of Martin State Forester holds annual open house at county ag. day and reaches approximately 400 members of public.</p> <p>Confirmed through interviewees with DoF staff that they maintain regular contact with permittees and other people with rights to use of resources on the FMU.</p>
<b>C2.3. Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.</b>	C	
2.3.a. If <i>disputes</i> arise regarding tenure claims or use rights then the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If these good-faith efforts fail, then federal, state, and/or local laws are employed to resolve such disputes.	C	<p>DoF maintains an open door policy both at the level of the central office and each state forest. Confirmed open door policy is used at Jackson-Washington and Ferdinand-Pike.</p> <p>DoF staff regularly check boundaries for timber sales that abut other ownerships. Additionally, they apply a no-harvest buffer zone to these types of sales.</p>
2.3.b. The forest owner or manager documents any significant disputes over tenure and use rights.	C	<p>DoF tracks legal ownership and boundary disputes through the State Land Office. Most issues deal with timber theft and unauthorized installation of septic lines or other utilities or residential uses (examples: gardens, yards, dog houses, sheds) into state lands.</p>
<b>P3 The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.</b>		
<b>C3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.</b>	C	
3.2.a. During management planning, the forest owner or manager consults with American Indian	C	In May of 2007, DoF sent letters to both federally recognized and unrecognized tribes with

<p>groups that have legal rights or other binding agreements to the FMU to avoid harming their resources or rights.</p>		<p>ancestral connections to the State of Indiana. DoF received three responses, including one update to contact information. Tribes have not expressed interest in any DoF state forests or resources. SCS' stakeholder consultation yielded no responses from tribes.</p>
<p>3.2.b. Demonstrable actions are taken so that forest management does not adversely affect tribal resources. When applicable, evidence of, and measures for, protecting tribal resources are incorporated in the management plan.</p>	C	<p>There are a few lithic scatters and isolated finds on some DoF lands. Lithic scatters may be managed depending on risk to archaeology site. Harrison-Crawford has chert, so there are many lithic scatters, but on another property this may be more significant. That is, the intensity of protection measures depends on how representative these findings are on these sites. DoF conducts site surveys for deposits and in that process identifies the need to research further areas. This is in procedures manual for cultural resources. DoF has also developed a White Paper on its protection of archaeological resources.</p>
<p><b>C4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.</b></p>	C	
<p>4.2.a. The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).</p>	C	<p>DoF takes active steps to ensure safety, such as:</p> <ul style="list-style-type: none"> <li>• safety inspections from DNR Human Resources occur at each state forest;</li> <li>• safety meetings take place once per month;</li> <li>• safety training classes are offered, e.g., chainsaw safety for DoF employees;</li> <li>• DoF provides insect repellent and safety boots for staff;</li> <li>• DoF is an active support of logger education in Indiana.</li> </ul> <p>During 2014 audit we observed DoF employees conforming to relevant safety protocols.</p>
<p>4.2.b. The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts or other written agreements include safety requirements.</p>	C	<p>DoF's timber sale agreement (4A Timber Sale Agreement includes several items related to safety (see items 12, 13, 15, 18, and 19). The TSI contract (4A TSI Bid-Contract under \$75,000) includes a section on compliance with all applicable federal, state, and local laws, which includes OSHA safety requirements.</p>
<p>4.2.c. The forest owner or manager hires well-qualified service providers to safely implement the management plan.</p>	C	<p>DoF's timber sale agreement requires that at least one logger on each job site have at least complete Game of Logging (GOL) Level 1 training. Observed conformance through logger interviews during 2014 audit.</p>
<p><b>C4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.</b></p>	C	
<p>4.4.a. The forest owner or manager understands the</p>	C	<p>Confirmed DoF is using the following approaches</p>

<p>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>to understand social impacts and incorporate into management:</p> <ol style="list-style-type: none"> <li>1. Ongoing archeological review of projects</li> <li>2. Open houses for public to review planned management</li> <li>3. Posting of management plans for public review on website.</li> <li>4. Timber sales are offered at different scales (volumes) for different businesses, such as for TSI and invasive species control.</li> <li>5. Public resources, including air, water, and soil, have been evaluated for both 'direct' and 'indirect' effects of management activities as well as the cumulative effect of said activities on these public resources. The results of this analysis are located within the 2008 Environmental Assessment (EA) document.</li> </ol> <p>In 2012, DoF produced a summary of their conformance with Indicator 4.4.a.</p>
<p>4.4.b. The forest owner or manager seeks and considers input in management planning from people who would likely be affected by management activities.</p>	<p>C</p>	<p>All management planning documents and timber sale plans are open to public comment for at least 30 days prior to finalization. Additionally, DoF holds several public meetings and open houses throughout the state each year to solicit and address public comments.</p>
<p>4.4.c. People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action so that they may express concern.</p>	<p>C</p>	<p>There are two principle ways that people are apprised of relevant activities: 1) timber sales &amp; state forest management guides are on the website and stakeholders can provide comments; and 2) Open houses (at open house will have list of planned activities). DoF also attempts to prepare news releases to advertise events. For adjacent landowners, a notification letter on upcoming timber sales is sent.</p>
<p>4.4.d. For <b>public forests</b>, consultation shall include the following components:</p> <ol style="list-style-type: none"> <li>1. Clearly defined and accessible methods for public participation are provided in both long and short-term planning processes, including harvest plans and operational plans;</li> <li>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;</li> <li>3. An accessible and affordable appeals process to planning decisions is available.</li> </ol> <p>Planning decisions incorporate the results of public consultation. All draft and final planning documents, and their supporting data, are made readily available</p>	<p>C</p>	<p>For background in this indicator and DoF, see Major CAR 2006.2 and minor CAR 2007.1. This indicator is nearly identical to the previous standard and those CARs addressed items 1-3, as well as the unnumbered part, of the indicator.</p> <p>In Indiana, stakeholders are free to use the legal system to appeal planning decisions. However, DoF's notification to adjacent landowners of upcoming activities, open door policies, annual open houses, and State Forest Stewardship Committee meetings are avenues for resolving grievances prior to legal action.</p> <p>Management planning documents, including upcoming timber sales, are made available to the public online. The public can also access</p>

<p>to the public.</p>		<p>publications and data on the website or upon request.</p> <p>Anyone can put in a public information request at any time per DoF's policy. The requests are reviewed on case by case basis. Unless there is some legal reason (RTE species, archaeological site, etc.) or the document is a draft not ready for public comment, the information is typically released. There may be a cost to the requestor for copying or other document production. In general, if someone really wants a document, they will get it from DoF.</p>
<p><b>P5 Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.</b></p>		
<p><b>C5.1. Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.</b></p>	<p>C</p>	
<p>5.1.a. The forest owner or manager is financially able to implement core management activities, including all those environmental, social and operating costs, required to meet this Standard, and investment and reinvestment in forest management.</p>	<p>C</p>	<p>DoF continues to demonstrate financial ability to implement management activities in a manner consistent with FSC standard. Despite several years of reduced funding (beginning in FY 09 with the loss of the mil tax), DoF has found ways to accomplish its management activities and strategic objectives. A very committed group of DoF employees (who have been willing to put in extra time after hours) has been key to accomplishing objectives while funding has diminished.</p> <p>The audit team is concerned that any further budget cuts or unfilled vacancies might begin to impact DoF's ability to accomplish all of its management activities and thus affect FSC conformance. An observation is not issued at this time because, over the last five years of shrinking budgets, the DoF has always found ways to get the job done.</p>
<p>5.1.b. Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.</p>	<p>C</p>	<p>Despite reduced budgets, DoF staff are able to implement core management activities to fulfill this standard with considerable dedication and commitment.</p>
<p><b>C5.2. Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.</b></p>	<p>C</p>	
<p>5.2.a. Where forest products are harvested or sold, opportunities for forest product sales and services are given to local harvesters, value-added processing and manufacturing facilities, guiding services, and other operations that are able to offer services at</p>	<p>C</p>	<p>Most timber harvesting activities are carried out by local logging contractors, who sometimes purchases sales of standing timber and market the material themselves. The group COC certificates managed by the State also allow</p>

<p>competitive rates and levels of service.</p>		<p>members to market FSC-certified products. Timber stand improvement (TSI) is typically contracted to local service providers.</p>
<p>5.2.b. The forest owner or manager takes measures to optimize the use of harvested forest products and explores product diversification where appropriate and consistent with management objectives.</p>	<p>C</p>	<p>Observed acceptable utilization at harvest sites during 2014 audit. As DoF primarily sells standing timber, it is up to the purchaser to market the product. Although there are very limited pulp wood markets in Indiana, there are generally good markets for most species of hardwood. There are typically several bidders for each timber sale offering. The group COC certificate managed by DoF is designed to assist group members to market certified products. Common products include veneer, pallets, lumber, and furniture grade material.</p>
<p>5.2.c. On public lands where forest products are harvested and sold, some sales of forest products or contracts are scaled or structured to allow small business to bid competitively.</p>	<p>C</p>	<p>A range of sale sizes are carried out in an attempt to allow successful competition by different sized operations. Ferdinand State Forest sometimes will divide a unit into separate pine and hardwood sales in order to ensure more loggers (who typically would not harvest pine) have an opportunity to bid.</p> <p>As part of the State of Indiana’s ‘Buy Indiana’ initiative, every state agency takes part in trying to achieve the goal that 90 cents of every dollar is spent on goods and services provided by businesses located in Indiana.</p>
<p><b>C5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.</b></p>	<p>C</p>	
<p>5.3.a. Management practices are employed to minimize the loss and/or waste of harvested forest products.</p>	<p>C</p>	<p>Utilization observed on harvest sites during the assessment was good in that mostly branches, tops and forked stems were left on site. This is particularly good given that there is not a strong pulp wood market in the state.</p>
<p>5.3.b. Harvest practices are managed to protect residual trees and other forest resources, including:</p> <ul style="list-style-type: none"> <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>	<p>C</p>	<p>See section 2.1. Audit team observed good protection of residual trees. In the case of rare exceptions, DoF issues penalties to the logger for stand damage (e.g., Compartment 10 Tract 16). Rutting concerns were only detected on one selected harvest (Compartment 1, Tracts 1, 11, 1) that had to be logged in wetter conditions than desired because of Indiana bat restrictions.</p> <p>BMPs, contract terms, and timber sale oversight by field personnel collectively result in operations taking place well within reasonable limits for residual stand damage. Because many high value trees are utilized as veneer, foresters are</p>

		sensitive to harvesting damage that would preclude this use if it occurred.
<b>C5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.</b>	C	
5.4.a. The forest owner or manager demonstrates knowledge of their operation’s effect on the local economy as it relates to existing and potential markets for a wide variety of timber and non-timber forest products and services.	C	<p>Considering DoF’s efforts to manage for outdoor recreation, the production of timber products, wildlife habitat, watershed health, and biodiversity, there is excellent conformance with this indicator. Specific observations include:</p> <ul style="list-style-type: none"> <li>• All areas visited sold a broad range of products including veneer, sawtimber, pallets, and furniture grade;</li> <li>• The group COC certificate has many members and continues to grow, indicating steady demand for certified products;</li> <li>• Forest recreation opportunities on DoF administered forests are exceptional and certain activities, such as horseback riding, are only available on DNR or private lands.</li> </ul>
5.4.b The forest owner or manager strives to diversify the economic use of the forest according to Indicator 5.4.a.	C	Recreation of all kinds is available. The forest products industry in the state has been responsive to the State’s COC group certificates.
<b>C5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.</b>	C	
5.5.a. In developing and implementing activities on the FMU, the forest owner or manager identifies, defines and implements appropriate measures for maintaining and/or enhancing forest services and resources that serve public values, including municipal watersheds, fisheries, carbon storage and sequestration, recreation and tourism.	C	DoF policies are clearly oriented towards maintaining and enhancing the full suite of forest services and resources such as watersheds and fisheries. The careful attention to BMP’s is an example of efforts to maintain forest services. See HEE report (8B HEE_Annual_report_2006-2010) for an analysis of forest services, which include recreation, ecosystem services, etc.
5.5.b The forest owner or manager uses the information from Indicator 5.5.a to implement appropriate measures for maintaining and/or enhancing these services and resources.	C	The designation and respect of protected areas and the implementation of BMPs is consistent with maintaining or enhancing watersheds, fisheries, carbon, recreation, and tourism.
<b>C5.6. The rate of harvest of forest products shall not exceed levels which can be permanently sustained.</b>	C	
<p>5.6.a. In FMUs where products are being harvested, the landowner or manager calculates the sustained yield harvest level for each sustained yield planning unit, and provides clear rationale for determining the size and layout of the planning unit. The sustained yield harvest level calculation is documented in the Management Plan.</p> <p>The sustained yield harvest level calculation for each planning unit is based on:</p> <ul style="list-style-type: none"> <li>• documented growth rates for particular</li> </ul>	C	DoF current harvest target is 14 mmbf, which is approximately 50% of growth. The current growth estimate is based on 3 methods: 1) 50 FIA plots on state forests from which growth can be calculated, 2) 2005 system-wide inventory is compared to the inventories done in the 1980s and 3) Increment borings were collected during the 2005 System Wide Inventory (SWI) and growth was estimated using the Burrel-Ashley system. All 3 estimates of net annual growth are about 28 million bf;

<p>sites, and/or acreage of forest types, age-classes and species distributions;</p> <ul style="list-style-type: none"> <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 treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.</p>		<p>The overall harvest goal for the system (14 mmbf) is allocated proportionally to the properties based on standing volume percentages, with adjustments for special situations such as variations driven in large part by forest health issues. Allowable cut is based on previous growth/yield data as described above and is allocated to each forest based on the 2005 System Wide Inventory figures with the intent being to not over harvest any particular forest. These figures are then adjusted based on special circumstances such as the need for salvage cuts (e.g., salvage after tornado on Clark State Forest).</p> <p>The Indiana Division of Forestry has developed a robust forest inventory system.</p> <p>A continuous forest inventory where 1/5 of the land base is inventoried each year is in the 7<sup>th</sup> year. After the 5th year was completed, DoF started to re-measure the plots allowing for growth computation. A preliminary comparison is being calculated, but another year of inventory is needed to come close to a statistically-reliable growth estimate. The system design is based on 10 years to develop a reliable growth estimate.</p>
<p>5.6.b. Average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level.</p>	<p>C</p>	<p>Timber Sale Volumes Sold in the Past Ten Years:</p> <p>2013-2014 17.1 mmbf                  2012-2013 12.0 mmbf                  2011-2012 14.4 mmbf                  2010-2011 14.0 mmbf                  2009-2010 10.6 mmbf                  2008-2009 12.1 mmbf                  2007-2008 11.3 mmbf                  2006-2007 10.3 mmbf                  2005-2006 7.7 mmbf                  2004-2005 3.6 mmbf</p> <p>Harvest records for the sites visited show that DoF does not exceed the calculated harvest rate; the average annual harvest rate 2004-2014 is 11.3 mmbf. See documented cited in 5.6.a.</p>
<p>5.6.c. Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across the FMU. Overstocked stands and stands that have been depleted or rendered to be below productive potential due to natural events, past management, or lack of management, are returned to desired stocking levels and composition at the earliest practicable time as justified in management objectives.</p>	<p>C</p>	<p>The combination of even- and uneven-aged management ensures that the FMU includes mixed age classes and species, and that regeneration harvests are effective in securing the next age class of oak-hickory type. The goal of maintaining 10% of the FMU in late seral conditions is consistent with some site characteristics, particularly on more mesic to wet-mesic sites with few oak-hickory species and associates.</p>



		<p>Because DoF is harvesting approximately 50% of estimated growth, there is room to allow additional salvage operations without cutting beyond sustainable levels. Actual harvesting levels will be monitored and compared with projections through time. Cutting levels can be adjusted accordingly.</p>
<p>5.6.d. For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial operations or where traditional or customary use rights may be impacted by such harvests. In other situations, the forest owner or manager utilizes available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.</p>	<p>NA</p>	<p>DoF does not have any significant commercially harvested NTFPs.</p>
<p><b>P6 Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.</b></p>		
<p><b>C 6.2. Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping, and collecting shall be controlled.</b></p>	<p>C</p>	
<p>6.2.a. If there is a likely presence of RTE species as identified in Indicator 6.1.a then either a field survey to verify the species' presence or absence is conducted prior to site-disturbing management activities, or management occurs with the assumption that potential RTE species are present.</p> <p>Surveys are conducted by biologists with the appropriate expertise in the species of interest and with appropriate qualifications to conduct the surveys. If a species is determined to be present, its location should be reported to the manager of the appropriate database.</p>	<p>C</p>	<p>DoF has a program to protect threatened and endangered species. Training is periodically provided on endangered species identification and management, most notably for Indiana bat habitat. There are 79 state-listed Threatened and Endangered (T and E) animal species (in Indiana the Indiana Bat and the Gray bat have the only endangered designation for fauna at the federal level). DoF participates in state and federal programs to research and protect T and E species. For example, DoF is participating in a review of invertebrate species with other government agencies.</p> <p>DoF actively uses the Division of Nature Preserves' Heritage Database to screen for T and E species in management areas. If a species is detected in a database query, DoF has its own wildlife biologist to carry out surveys and devise protection plans. T and E species locations are identified as part of the process of writing the resource management guide prior to management activities.</p>

		<p>2014 audit confirmed staff at Jackson/Washington, Ferdinand/Pike, and Martin State Forests are following protocols for protecting RTE species.</p> <p>Forester at Jackson Washington State Forest identified Timber Rattlesnake and reported it to Nature preserves.</p>
<p>6.2.b. When RTE species are present or assumed to be present, modifications in management are made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats. <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>When RTE species are known to occur (by querying the Natural Heritage Data), staff will determine appropriate steps to protect the species. These steps may include a consultation with the biologist or ecologist or written species-specific management plans to accommodate individual species requirements. Staff consult Natureserve web site to search for management guidelines for T and E species.</p> <p>2014 audit confirmed staff at Jackson/Washington, Ferdinand/Pike, and Martin State Forests are following protocols for protecting RTE species.</p>
<p>6.2.c. For medium and large public forests (e.g. state forests), forest management plans and operations are designed to meet species’ recovery goals, as well as landscape level biodiversity conservation goals.</p>	C	<p>DoF follows its interim guidelines on the conservation of the Indiana Bat. These guidelines were developed by its biologist in consultation with federal agencies. DoF is close to receiving approval for its HCP to address Indiana Bat conservation. Research is showing that management of State Forests is compatible with conservation goals for Indiana Bat.</p> <p>Pauli, Benjamin (2014). <i>Nocturnal and Diurnal Habitat of Indiana and Northern Long Eared Bats, and the Simulated Effect of Timber Harvest on Habitat Suitability</i>, A Dissertation Submitted to the Faculty of Purdue University by Benjamin P. Pauli</p>
<p>6.2.d. Within the capacity of the forest owner or manager, hunting, fishing, trapping, collecting and other activities are controlled to avoid the risk of impacts to vulnerable species and communities (See Criterion 1.5).</p>	C	<p>DoF field staff regularly patrol the FMU to detect unauthorized activities and work with interested user groups to avoid adverse impacts to flora, fauna, and soil resources. For example, SCS observed signage at district offices regarding ginseng harvesting. SCS also noted that district offices were working with horse rider groups on maintaining established trails.</p> <p>Martin State Forest worked with Conservation Officers to arrest ginseng poacher.</p>
<p><b>C6.3. Ecological functions and values shall be</b></p>	C	

<p><b>maintained intact, enhanced, or restored, including:</b>  <b>a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.</b></p>		
<p>6.3.a.1. 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.</p>	<p>C</p>	<p>DoF has a goal to maintain 10% of the forest in the underrepresented early successional stage. Nature Preserves are being identified and protected on DoF property. DoF strategic plan is to maintain 10% of the forest in an older forest condition. Areas designated for older forest condition include:</p> <ul style="list-style-type: none"> <li>• Nature Preserves on State Forests</li> <li>• Control units (no harvest) of Hardwood Ecosystem Experiment (HEE)</li> <li>• ‘No harvest zone’ around active Indiana bat hibernacula on state forests</li> <li>• Back Country Areas (BCA) located on Morgan-Monroe/Yellowwood, Jackson-Washington, and Clark state forests</li> <li>• Old growth areas and associated 300 foot buffer zone</li> </ul> <p>As confirmed during the audit, practices of long rotations and lower intensity single tree selection harvests are moving stands to a late seral condition.</p> <p>Procedure for encouraging older forest condition in Back Country Areas was updated in 2014- See Obs 2013.3</p>
<p>6.3.a.2. 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.</p>	<p>C</p>	<p>Most rare ecological communities have been protected as Nature Preserves. Once a Nature Preserve is established, management decisions are made by or in consultation with the Division of Nature Preserves.</p> <p>DoF has a policy to allow management to occur in rare ecological communities if it maintains or enhances the viability of the community.</p> <p>Observed protection of Cucumber Magnolia stand on Jackson State Forest.</p>
<p>6.3.a.3. 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.</p> <p>Type 1 Old Growth is protected from harvesting and road construction. Type 1 old growth is also protected from other timber management activities,</p>	<p>C</p>	<p>DoF has developed procedures to assess and identify Type 1 and Type 2 old growth on state forests. This guidance includes definitions of old growth classifications consistent with indicator 6.3.a.1, and a continuous assessment protocol to be incorporated this point forward in the routine development of tract management guides. DoF has a process to identify and evaluate potential old forest. Some areas are being evaluated, but none have been identified as Type II. DoF has other areas on the forests that are being</p>

<p>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>managed for late seral conditions, but do not yet meet the definition of Type II.</p>
<p>6.3.b. To the extent feasible within the size of the ownership, particularly on larger ownerships (generally tens of thousands or more acres), management maintains, enhances, or restores habitat conditions suitable for well-distributed populations of animal species that are characteristic of forest ecosystems within the landscape.</p>	<p>C</p>	<p>IDNR DIVISION OF FORESTRY STRATEGIC PLAN 2008-2013 has a goal to provide a range of forest habitats that will provide suitable conditions for well-distributed animal populations. See also comments on late and early seral habitat in 6.3.a.1.</p>
<p>6.3.c. Management maintains, enhances and/or restores the plant and wildlife habitat of <b>Riparian Management Zones (RMZs)</b> to provide:</p> <ol style="list-style-type: none"> <li>a) habitat for aquatic species that breed in surrounding uplands;</li> <li>b) habitat for predominantly terrestrial species</li> </ol>	<p>C</p>	<p><u>Indiana Logging and Forestry Best Management Practices: BMP Field Guide</u> (BMP Field Guide) is used by field foresters to guide the protection of RMZs. The buffer zones established in RMZs ensure upland-lowland connectivity (a, b, and c) and maintenance of riparian vegetation and soils</p>

<p>that breed in adjacent <b>aquatic habitats</b>;</p> <p>c) habitat for species that use riparian areas for feeding, cover, and travel;</p> <p>d) habitat for plant species associated with riparian areas; and,</p> <p>e) stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem.</p>		<p>(d and e). Field visits in 2014 confirmed conformance with 6.3.c.</p>
<p><b>Stand-scale Indicators</b> 6.3.d Management practices maintain or enhance plant species composition, distribution and frequency of occurrence similar to those that would naturally occur on the site.</p>	C	<p>Indiana DoF has an increased emphasis on management and sustainability of oak-hickory communities due to their decline in the landscape (Indiana State Forests Environmental Assessment 2008). Field sites visited in 2014 confirmed DoF’s work to maintain and regenerate oak hickory type. Foresters interviewed were very knowledgeable on approaches to regenerate oak.</p>
<p>6.3.e. When planting is required, a local source of known provenance is used when available and when the local source is equivalent in terms of quality, price and productivity. The use of non-local sources shall be justified, such as in situations where other management objectives (e.g. disease resistance or adapting to climate change) are best served by non-local sources. <b>Native species</b> suited to the site are normally selected for regeneration.</p>	C	<p>Seedlings planted in the forest are grown in the local nursery. 2014 audit included visit to Vallonia State Nursery, which provides majority of seedlings.</p>
<p>6.3.f. Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include: 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 b) vertical and horizontal complexity. Trees selected for <b>retention</b> are generally representative of the dominant species found on the site.</p>	C	<p>DoF has an excellent guide “Management guidelines for compartment-level wildlife habitat features” that field foresters use to maintain or enhance site-level habitat components, such as large live trees, declining trees, and snags. During 2014 audit, confirmed guidelines are being followed.</p>
<p>6.3.g.1 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</p>	C	<p>DoF primarily employs uneven-aged management practices, such as individual tree selection and group selection. However, DoF practices even-aged management on an experimental basis. These are well-documented in the HEE report. Even-aged management practices include clearcuts and shelterwood systems. A clearcut to convert non-native pine to hardwood on Ferdinand Pike State Forest included sufficient retention within islands and in scattered residuals. Property manager worked with DoF biologist to ensure retention met green tree retention procedure.</p>

<p>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>6.3.g.2 Under very limited situations, the landowner or manager has the option to develop a qualified plan to allow minor departure from the opening size limits described in Indicator 6.3.g.1. A qualified plan:</p> <ol style="list-style-type: none"> <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 other values compared to the normal opening size limits, including for sensitive and rare species.</li> <li>5. Is reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings.</li> </ol>	<p>NA</p>	<p>There are no even-aged management restrictions in the Lake States/ Central Hardwood region.</p>
<p>6.3.h. The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control <b>invasive species</b>, 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>C</p>	<p>See response to Observation 2013.1.</p>
<p>6.3.i. In applicable situations, the forest owner or manager identifies and applies site-specific fuels management practices, based on: (1) natural fire regimes, (2) risk of wildfire, (3) potential economic losses, (4) public safety, and (5) applicable laws and regulations.</p>	<p>C</p>	<p>DoF maintains site-level fire plans that are primarily conducted in oak-hickory understories to control competing species. This regime mimics natural periodic ground fires that historically occurred in this habitat type.</p>

<p><b>P7 A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.</b></p>		
<p><b>C7.1. 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>c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories. d) Rationale for rate of annual harvest and species selection. e) Provisions for monitoring of forest growth and dynamics. f) Environmental safeguards based on environmental assessments. g) Plans for the identification and protection of rare, threatened and endangered species.</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>	C	
<p>7.1.a. The management plan identifies the ownership and legal status of the FMU and its resources, including rights held by the owner and rights held by others.</p>	C	<p>DoF’s ownership of the State Forest system has been established through state legislation The Procedures manual (<a href="http://www.in.gov/dnr/forestry/3647.htm">http://www.in.gov/dnr/forestry/3647.htm</a>) covers legal status, treaty rights, easements, deed restrictions, and leasing of the forest and its resources.</p> <p>See SCS 2011 Full Evaluation Report for additional details.</p>
<p>7.1.b. The management plan describes the history of land use and past management, current forest types and associated development, size class and/or successional stages, and natural disturbance regimes that affect the FMU (see Indicator 6.1.a).</p>	C	<p>History of past management is included in several management planning documents, including the Indiana Statewide Forest Assessment 2010. Current forest types and stand development are addressed in the Statewide Forest Assessment and individual FMPs for state forests. Past and current natural disturbances are addressed in several management planning documents, such as <i>Increasing Wildlife Habitat Diversity on Forested Lands managed by the Indiana Department of Natural Resources and Will Restricting Timber Harvesting from State Forest “Backcountry Areas” Benefit Our Species of Greatest Conservation Concern?</i></p> <p>Environmental Assessment (EA) – Natural disturbance regimes are described. The</p>

		<p>compartment management guides explain the past land use and management of the compartment, such as past ownership and what management has happened since DoF has taken management control.</p>
<p>7.1.c. The management plan describes:  a) current conditions of the timber and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions.</p>	<p>C</p>	<p>Documents reviewed:</p> <p>.1.c. Desired future condition statements are nested within several sections of the State Forest procedures manual, the Indiana State Forest Environmental Assessment and within tract management guides. This process aims to institutionalize the inclusion of a desired future condition’ discussion on tract level management guides.</p> <p>Current plans have regeneration expectation statement.</p> <ul style="list-style-type: none"> <li>• Strategic plan</li> <li>• Draft HCP</li> <li>• Management Resource Guide</li> <li>• Desired future conditions – management guides (see “Overall” section and , strategic plan</li> </ul> <p>Management guides are reviewed prior to timber sale being marked</p> <p>See SCS 2011 Full Evaluation Report for additional details.</p>
<p>7.1.d. The management plan includes a description of the landscape within which the FMU is located and describes how landscape-scale habitat elements described in Criterion 6.3 will be addressed.</p>	<p>C</p>	<p>Tract Management Guides describe the landscape context of each tract.</p>
<p>7.1.e. The management plan includes a description of the following resources and outlines activities to conserve and/or protect:</p> <ul style="list-style-type: none"> <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>	<p>C</p>	<p>The site level resource management guide includes a description of any rare, threatened or endangered species that have been identified on the site.</p> <p>The site level resource management guide describes the general habitat condition and wildlife habitats.</p> <p>The site level resource management guide covers any water resources on the site and describes the soils.</p> <p>The Division of Forestry designates specific areas as High Conservation Value Forests (HCVF) (document found on the web site).</p> <p>The DoF has completed a gap analysis for representative sample areas.</p> <p>EA, Nature Preserve, NHID for presence of RTE species.</p> <p>Plant/ community and wildlife in Description in site management plans.</p>



		Water and soil resource discussed in site plans RSA/ HCV
7.1.f. If invasive species are present, the management plan describes invasive species conditions, applicable management objectives, and how they will be controlled (see Indicator 6.3.j).	C	Evidence examined: <ul style="list-style-type: none"> <li>Invasive species plan</li> <li>Site plan</li> <li>See CFI (5A_draft_CFI)</li> <li>State Forest Management Strategy, published in April 2011</li> </ul> <p>The State Forest Management Strategy discusses applicable management objectives for invasive species and the need for prioritization of those needing control. Management guides for state forests state what invasive species are present. See response to Observation 2013.1.</p>
7.1.g. The management plan describes insects and diseases, current or anticipated outbreaks on forest conditions and management goals, and how insects and diseases will be managed (see Criteria 6.6 and 6.8).	C	EAB, Gypsy moth, have EAB silvicultural guidelines. Near complete removal of ash as generally prescribed to slow emerald ash borer spread and to salvage material.
7.1.h. If chemicals are used, the plan describes what is being used, applications, and how the management system conforms with Criterion 6.6.	C	The TSI work often involves chemical use. See Management Guides and TSI contracts. Procedures manual also has some information.  Follow label, TSC contracts.
7.1.i. If biological controls are used, the management plan describes what is being used, applications, and how the management system conforms with Criterion 6.8.	NA	DoF does not currently use biological control agents.
7.1.j. The management plan incorporates the results of the evaluation of social impacts, including: <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>	C	In 2012 DoF produced a summary document describing how social impacts are assessed and incorporated. See response to CAR 2011.10 in SCS Annual Report 2012.  See SCS 2011 Full Evaluation Report for additional details.
7.1.k. The management plan describes the general purpose, condition and maintenance needs of the	C	Management guides provide a description of access to different timber sales and describe any

transportation network (see Indicator 6.5.e).		needs for maintenance and repair.  Documents reviewed: <ul style="list-style-type: none"> <li>• BMP manual</li> <li>• Management guides</li> </ul>
7.1.l. The management plan describes the silvicultural and other management systems used and how they will sustain, over the long term, forest ecosystems present on the FMU.	C	2005-2013 – Strategic Plan.  The procedures manual provides an overarching description of the silvicultural systems on the FMU and the rationale for their use in terms of creating the desired age and species class distributions.  Documents reviewed: <ul style="list-style-type: none"> <li>• Strategic plan</li> <li>• Procedures manual – Silvicultural Guidelines</li> </ul>
7.1.m. The management plan describes how species selection and harvest rate calculations were developed to meet the requirements of Criterion 5.6.	C	No models are used to determine allowable harvest. Allowable harvest is based on actual system wide forest inventory. Continuous Forest Inventory (CFI) Summary.  See Indicator 5.6.a above.
7.1.n. The management plan includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.	C	Management Guide. CFI. Other  Indiana DoF properties section wildlife completes annual monitoring snag and cavity trees, spring resident bird populations, summer breeding bird populations, forest amphibians, and deer impacts from browsing. Methods used for monitoring are provided in the annual report “Indiana Division of Forestry Properties Section Wildlife Habitat Program 2010 Annual Report” Department of fisheries conducts annual creel census. The Wildlife monitoring annual report and CFI procedures includes reference to methodologies.
7.1.o. The management plan includes maps describing the resource base, the characteristics of general management zones, special management areas, and protected areas at a level of detail to achieve management objectives and protect sensitive sites.	C	DoF has detailed maps for all properties in both the central and field offices. GIS database has layers for property boundaries, roads, special management areas, protected areas, etc. Archaeological sites are protected from the general public’s view.
7.1.p. The management plan describes and justifies the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.	C	Harrison Crawford State Forest specifies dozer because of winter harvest.  Timber harvest contracts specify equipment limitations and requirements. Harvest machinery for where special equipment is required may be specified. Most operators use grapple or cable skidders.
7.1.q. Plans for harvesting and other significant site-	C	Site plans include timber harvest contracts, site

<p>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>plans, burn plans, and management guides. Environmental limitations and safeguards are described, such as T and E species presence, and riparian areas. Timber harvest contracts specify health and safety requirements, and include maps of the unit.</p> <p>See SCS 2011 Full Evaluation Report for additional details.</p>
<p>7.1.r. The management plan describes the stakeholder consultation process.</p>	<p>C</p>	<p>When conducting the Statewide Forest Assessment &amp; Strategy, DoF documented how it coordinated stakeholder consultations on a web page titled "Stakeholder Coordination" <a href="http://www.in.gov/dnr/forestry/5438.htm">http://www.in.gov/dnr/forestry/5438.htm</a></p> <p>DoF has included a section called "Submitting a Public Comment" on its webpage: <a href="http://www.in.gov/dnr/forestry/3646.htm">http://www.in.gov/dnr/forestry/3646.htm</a>. In this section, the text explains how a stakeholder may submit a comment in three ways. Comments received on the 2008-2013 Strategic Plan for the Division of Forestry are summarized here: <a href="http://www.in.gov/dnr/forestry/files/fo_Summary_of_Public_Comments.040108.pdf">http://www.in.gov/dnr/forestry/files/fo_Summary_of_Public_Comments.040108.pdf</a>.</p>
<p><b>C7.2. The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.</b></p>	<p>C</p>	
<p>7.2.a The management plan is kept up to date. It is reviewed on an ongoing basis and is updated whenever necessary to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances. At a minimum, a full revision occurs every 10 years.</p>	<p>C</p>	<p>DoF is operating under an informal extension to its 2008-2013 Strategic Plan. See Observation 2014.2.</p> <p>Management Guides are updated in accordance with the re-inventory and harvest schedule.</p> <p>Additionally DoF maintains a current website so that management planning documents are more easily accessible by state workers and the public.</p>
<p><b>C7.3. Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plans.</b></p>	<p>C</p>	
<p>7.3.a. Workers are qualified to properly implement the management plan; All forest workers are provided with sufficient guidance and supervision to adequately implement their respective components of the plan.</p>	<p>C</p>	<p>DoF details the minimum requirements for all of its positions with HR. DoF conducts meetings and trainings so that employees understand and consistently implement their portions of the FMP. DoF maintains records of trainings and meetings. Contract loggers must submit evidence of required training in order to qualify for state harvests.</p> <p>Evidence: Foresters, managers, and specialists interviewed</p>

		<p>have professional natural resources degrees (mostly in forestry) from major universities.</p> <p>October 9, 2014: Statewide Resource Specialist/Manager Meeting (aka Fall Resource Management Update, 5 hours)</p> <p>Reviewed the “Record of Training” or equivalent for several employees: D.P., Resource Specialist (31 contact hours in 2014 through 9 months).</p> <p>Stilt grass training and work day on 7.09.14: office and field training by TNC at MMSF to train field staff on invasive species control practices. Amanda Smith participated in the recent training on stilt grass control, and her written record of training shows a systematic, practical, and comprehensive training program as applied to a recently-hired forester.</p>
<p><b>C7.4. While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.</b></p>	<p>C</p>	
<p>7.4.a. While respecting landowner confidentiality, the management plan or a management plan summary that outlines the elements of the plan described in Criterion 7.1 is available to the public either at no charge or a nominal fee.</p>	<p>C</p>	<p>The following documents serve as DoF’s public summary.</p> <p><b>2010 Annual Report</b>  <a href="http://www.in.gov/dnr/forestry/files/fo-2010AnnualReport.pdf">http://www.in.gov/dnr/forestry/files/fo-2010AnnualReport.pdf</a> )</p> <p><b>State Forest Environmental Assessment</b>  <a href="http://www.in.gov/dnr/forestry/files/fo-StateForests_EA.pdf">http://www.in.gov/dnr/forestry/files/fo-StateForests_EA.pdf</a> )</p> <p><b>Division of Forestry 2008 -2013 Strategic Plan</b>  <a href="http://www.in.gov/dnr/forestry/files/fo-Forestry-Strategic-Plan-2008-2013.Final.pdf">http://www.in.gov/dnr/forestry/files/fo-Forestry-Strategic-Plan-2008-2013.Final.pdf</a>)</p> <p><b>Resource Management Guides</b> Management guides for individual tracts are available  <a href="http://www.in.gov/dnr/forestry/3643.htm">http://www.in.gov/dnr/forestry/3643.htm</a> )</p> <p>DoF’s webpage also includes other documents that are completely accessible to the public.</p>
<p>7.4.b. Managers of public forests make draft management plans, revisions and supporting documentation easily accessible for public review and comment prior to their implementation. Managers address public comments and modify the plans to ensure compliance with this Standard.</p>	<p>C</p>	<p>All tract Management Guides since 2010 are made publically available on DoF website.</p> <p>DoF has made public drafts available for the 2008-2013 period of the management plan. Management planning documents are easily accessible via <a href="http://www.in.gov/dnr/forestry">http://www.in.gov/dnr/forestry</a>. A summary of how DoF responded to public comments received for the 2008-2013 period is provided here:  <a href="http://www.in.gov/dnr/forestry/files/fo_Summar">http://www.in.gov/dnr/forestry/files/fo_Summar</a></p>

		<a href="#">y_of_Public_Comments.040108.pdf.</a>
<b>P8 Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.</b>		
<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	
8.2.a.1. For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.	C	DoF meets the breadth of this Indicator through its periodic system-wide inventory and CFI system, which together cover items a)-f).  The process to evaluate regeneration in regeneration opening (group selection and clear-cuts) is described in the new form "State Forest Timber Sale Post-Harvest Evaluation". The form includes Y/N answers for regeneration adequacy, presence of invasive species, and actions needed.
8.2.a.2. Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information shall include date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative.	C	During active operations, monitoring includes at least weekly site inspections with the results documented on the Timber Sale Visitation and Evaluations. Each sale is also officially "closed out" with an inspection by a central office forester. Documentation was reviewed for a selection of sites visited during the audit.
8.2.b The forest owner or manager maintains records of harvested timber and NTFPs (volume and product and/or grade). Records must adequately ensure that the requirements under Criterion 5.6 are met.	C	Permits are not allowed for ginseng harvesting on State Forests. The Division of Nature Preserves is responsible for regulating the harvest and trade of ginseng in the State. Sales records are kept for each timber sale that allow for volume analysis at the district and whole-state forest system level. Current harvest data shows that harvest does not exceed growth.
8.2.c. The forest owner or manager periodically obtains data needed to monitor presence on the FMU of: <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>	C	Indiana DoF properties section wildlife biologist completes annual monitoring snag and cavity trees, spring resident bird populations, summer breeding bird populations, forest amphibians, and deer impacts from browsing. Division of Fish & Wildlife, fisheries section conducts annual creel census. The State of Indiana has a breeding bird atlas. Periodic surveys are completed for bats in caves. Periodic surveys are completed for the wood rat. Ruffed Grouse drumming surveys are completed. Nature Preserves completes annual surveys on preserves. DoF completes monitoring of BMP's annually.

		<p>T and E species that were previously undetected in other surveys are reported to the Natural Heritage Inventory Database.</p> <p>Monitoring of HCV occurs as part of site inspections and, if near an active harvest, as part of harvest monitoring. Should HCVs undergo active management, such as prescribed fire, DoF monitors the response (e.g., regeneration).</p> <p>When management guides are updated, the invasive species section is also updated. Informal monitoring also occurs and since most field staff are licensed applicators, they may treat trouble spots quickly.</p> <p>As part of HCP development, extensive bat monitoring has occurred across Indiana State Forests. Results of this monitoring have been accepted in peer reviewed scientific journals.</p>
8.2.d.1. Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective.	C	<p>Evidence of monitoring includes the following reports and records:</p> <ul style="list-style-type: none"> <li>• Timber sale inspection reports</li> <li>• Annual BMP monitoring report results</li> <li>• Contract monitoring (TSI forms)</li> </ul> <p>More fundamental to meeting this indicator, DoF inspects active timber sales and conducts post-harvest reviews to ensure that objectives and BMPs are being met.</p>
8.2.d.2. A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.	C	<p>DoF monitors road construction and maintenance by tracking how many miles are completed each year per forest employee. Informal inspections occur during and after timber harvests.</p>
8.2.d.3. The landowner or manager monitors relevant socio-economic issues (see Indicator 4.4.a), including the social impacts of harvesting, participation in local economic opportunities (see Indicator 4.1.g), the creation and/or maintenance of quality job opportunities (see Indicator 4.1.b), and local purchasing opportunities (see Indicator 4.1.e).	C	<p>Summary and Monitoring of Social Impacts of State Forest Management Activities (CAR 2011.3 and 2011.11 Summary and Monitoring of Social Impacts.doc)</p>
8.2.d.4. Stakeholder responses to management activities are monitored and recorded as necessary.	C	<p>Strategic Plan and EA has stakeholder comments and responses recorded. Stakeholder comments and responses to Management Guides are summarized on DoF website.</p>
8.2.d.5. Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3).	C	<p>No tribes have expressed interest in monitoring sites of cultural significance. Many sites are pre-historic, making it difficult to tell which tribal groups were present.</p>
8.2.e. The forest owner or manager monitors the	C	<p>Costs of arranging each timber sale is included in</p>

<p>costs and revenues of management in order to assess productivity and efficiency.</p>		<p>each site plan for later analysis. The budget office maintains information on all expenditures and income. DoF's upper management analyses budgets for individual projects and the department as a whole to assess productivity and efficiency.</p>
<p><b>P9 Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.</b></p> <p><b>High Conservation Value Forests are those that possess one or more of the following attributes:</b></p> <ul style="list-style-type: none"> <li>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</li> <li>b) Forest areas that are in or contain rare, threatened or endangered ecosystems</li> <li>c) Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control)</li> <li>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).</li> </ul>		
<p><b>C9.4. 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>9.4.a. The forest owner or manager monitors, or participates in a program to annually monitor, the status of the specific HCV attributes, including the effectiveness of the measures employed for their maintenance or enhancement. The monitoring program is designed and implemented consistent with the requirements of Principle 8.</p>	<p>C</p>	<p>Division of Nature Preserves undertakes monitoring of HCVF. See response to CAR 2011.15 in 2012 report.</p>
<p>9.4.b. When monitoring results indicate increasing risk to a specific HCV attribute, the forest owner/manager re-evaluates the measures taken to maintain or enhance that attribute, and adjusts the management measures in an effort to reverse the trend.</p>	<p>C</p>	<p>Nature Preserve personnel have suggested that periodic burning be used to maintain the Leavenworth Barrens as an open habitat.</p> <p>DoF has been working on an Indiana Bat HCP for some time. In the meantime, DoF applies its interim guidelines for Indiana Bat from September 2013. DoF wildlife staff has indicated that other bat species may be at risk due to White-nose syndrome and that it awaits further information from cooperating organizations, and federal and state agencies on bat conservation.</p>
<p><b>P10 Plantations shall be planned and managed in accordance with Principles and Criteria 1-9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.</b></p> <p><b>Based on the field evidence examined during the 2011 assessment, SCS has determined that DoF's forest management system does not meet the FSC definition of plantation management. Thus, Principle 10 is wholly non-applicable.</b></p>		

## **Appendix 6 – Chain of Custody Indicators for FMEs**

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