

# 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

## SCS-FM/COC-00099N

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Indianapolis, Indiana, 46204  
<http://www.in.gov/dnr/forestry/>

CERTIFIED	EXPIRATION
27 June 2017	26 June 2022

DATE OF FIELD EVALUATION
22-24 October 2018
DATE OF LAST UPDATE
20 December 2018

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## Foreword

Cycle in annual surveillance evaluations				
<input type="checkbox"/> 1 <sup>st</sup> annual evaluation	<input checked="" type="checkbox"/> 2 <sup>nd</sup> annual evaluation	<input type="checkbox"/> 3 <sup>rd</sup> annual evaluation	<input type="checkbox"/> 4 <sup>th</sup> annual evaluation	<input type="checkbox"/> Other (expansion of scope, Major CAR audit, special audit, etc.):
<b>Name of Forest Management Enterprise (FME) and abbreviation used in this report:</b>				
Indiana Department of Natural Resources, DNR; Division of Forestry, DOF; or FME				

All certificates issued by SCS under the aegis of the Forest Stewardship Council (FSC) require annual evaluations 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 evaluations are not intended to comprehensively examine the full scope of the certified forest operations, as the cost of a full-scope evaluation would be prohibitive and it is not mandated by FSC evaluation protocols. Rather, annual evaluations 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 evaluation);
- Follow-up inquiry into any issues that may have arisen since the award of certification or prior to this evaluation; 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 evaluation.

### Organization of the Report

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the public and is intended to provide an overview of the evaluation process, the management programs and policies applied to the forest, and the results of the evaluation. Section A will be posted on the FSC Certificate Database (<http://info.fsc.org/>) no less than 90 days after completion of the on-site evaluation. Section B contains more detailed results and information for required FSC record-keeping or the use by the FME.

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## SECTION A – PUBLIC SUMMARY

### 1. General Information

#### 1.1 Evaluation Team

<b>Auditor Name:</b>	Beth Jacqmain	<b>Auditor role:</b>	FSC Lead Auditor, SFI Auditor
<b>Qualifications:</b>	Beth is a Certification Forester with SCS Global Services. Master of Science in Forest Biology/Ecology from Auburn University and Bachelor of Science in Forest Management from Michigan State University. Beth has 20+ years' experience in forestry including public land management, private consulting, and private corporate forest management working with landowners and harvest crews. Qualified ANSI RAB accredited ISO 14001 EMS Lead Auditor and a FSC Lead Auditor for Forest Management/Chain of Custody. Audited and led FSC evaluations, harvest and logging operations certification audits; and joint/combined PEFC (AFS, RW, SFI, ATFS) audits. A 10-year member of the Forest Guild, 20-year adjunct-Faculty with Itasca Community College, Natural Resources Department. Member 20+ years Society of American Foresters, served MN State Chair 2009 and multiple committees throughout. Beth's experience is in forest management and ecology; ecosystem silviculture; the use of silviculture towards meeting strategic and tactical goals; nursery/tree regeneration; forest timber quality improvement (sawmill/veneer), conifer thinning operations, pine restoration, wildfire fighting, and fire ecology in conifer dominated systems. Beth has audited throughout the United States, Australia, New Zealand, and Fiji. Beth has experience in forest ecology and management in the Midwest, Pacific Northwest, and the Southeastern regions of the US.		
<b>Auditor Name:</b>	Ruthann M. Schulte	<b>Auditor role:</b>	SFI Lead Auditor, FSC Auditor
<b>Qualifications:</b>	For decades Ruthann has worked on issues related to landscape management, wildlife management, and the long-term stewardship of private forest and ranch lands. Over her career, she has coordinated forest certification programs for private industry. Ruthann holds a B.S. in Biology from Siena Heights College in Adrian, Michigan and a Master of Biology from the University of Louisville in Louisville, Kentucky. She is an ISO 14001 accredited auditor and has served on internal audit teams for ISO 9001. Ms. Schulte is an auditor for the SCS Forest Management and Chain of Custody programs.		

#### 1.2 Total Time Spent on Evaluation

A. Number of days spent on-site assessing the applicant:	3
B. Number of auditors participating in on-site evaluation:	2
C. Number of days spent by any technical experts (in addition to amount in line A):	0
D. Additional days spent on preparation, stakeholder consultation, and follow-up:	2
<b>E. Total number of person days used in evaluation:</b>	<b>8</b>

#### 1.3 Standards Used

All standards used are available on the websites of FSC International ([www.fsc.org](http://www.fsc.org)) or SCS Global Services ([www.SCSglobalServices.com](http://www.SCSglobalServices.com)). All standards are available on request from SCS Global Services via the comment form on our

website. When no national standard exists for the country/region, SCS Interim Standards are developed by modifying SCS's Generic Interim Standard to reflect forest management in the region and by incorporating relevant components of any Draft Regional/National Standard and comments from stakeholders. More than one month prior to the start of the field evaluation, SCS Draft Interim Standards are provided to stakeholders identified by FSC International, SCS, forest managers under evaluation, and the FSC National or Regional Office for comment. SCS's COC indicators for FMEs are based on the most current versions of the FSC Chain of Custody Standard, FSC Standard for Group Entities in Forest Management Groups (FSC-STD-30-005), and FSC Accreditation Requirements.

Standards used <i>NOTE: Please include the full standard name and Version number and check all that apply.</i>	<input checked="" type="checkbox"/> Forest Stewardship Standard(s), including version: <a href="#">Click to enter text</a>
	<input checked="" type="checkbox"/> SCS COC indicators for FMEs, V7-0
	<input checked="" type="checkbox"/> FSC Trademark Standard (FSC-STD-50-001 V2-0)
	<input type="checkbox"/> FSC standard for group entities in forest management groups (FSC-STD-30-005), V1-1
	<input type="checkbox"/> Other:

## 2. Certification Evaluation Process

### 2.1 Evaluation Itinerary, Activities, and Site Notes

22 October 2018, Monday, Clark State Forest	
FMU / location / sites visited	Activities / notes
Clark State Forest Office (Schulte and Jacqmain)	Opening Meeting: Introductions, client update, review audit scope, audit plan, intro/update to SFI and FSC standards, confidentiality and public summary, conformance evaluation methods and tools, review of open CARs/OBS, emergency and security procedures for evaluation team, and final site selection.
Clark State Forest Office (Schulte and Jacqmain)	Tree planting near the office. Staff were looking to decrease mowing area and considering about growing trees as planting stock. This area was chosen to try a planting. Worked with school groups to plant tulip poplar. Trees are native to Indiana were from the nursery in Vallonia. Are also considering conducting a prescribed burn to encourage the native grasses to establish.
Jackson Road Trailhead for Knobstone Trail (Schulte and Jacqmain)	Knobstone is the longest footpath in Indiana at 62 miles. It passes through Clark SF, Deam Lake Rec. Area, and Jackson-Washington SF. Map of the trail also has DNR Forestry Management information.
Tract C11 T2, 3, & 4, Sale #6301503 (Schulte and Jacqmain)	Oak hickory stand harvested and completed in 2016. TSI has been contracted. The sale area had an old homestead site and well. During the 2012 tornado the remains were buried in tree tops and could not be located for the sale. The archeologist marked out the area of the remains as a no activity area within the sale. Observed functional BMPs in place on skid trails that were installed at closeout.
Daisy Hill Horse Trail (Schulte)	Cooperative horse trail maintenance project with Friends of Clark/Deam Horse Trails. DoF provided the design work, rock, and transportation of rock to work site. Friends provided all the labor including hiring the equipment. Several steep lengths that were previously entrenched about 3 feet had to be built back up. Walked one of the first stretches that was treated two years ago. The area weathered well despite some rather large storms. A few patches were identified that require a bit of hardening to last over time. All in all the trail is much improved.
Mountain Grove Sale, Sale #6301702 (Schulte)	White oak and old field pine stand of about 48 acres. Harvest completed summer 2018. A few openings were created that staff went back and conducted TSI by cutting out the small maple and pine and treating the stumps with triclopyr. Will TSI beech in another opening. Cultural site identified. Old well clearly identified, covered, and buffered. Buffer applied to blue line stream. Observed very few cut trees in the buffer – far less than allowable by BMPs.
Deam Lake, Tract C15 T9 & 10	Sale marked not sold. Removing planted Virginia pine and conducting an improvement cut – mostly oak die back. Good oak advance regeneration. Pine openings marked and pulled back from lake to provide a

(Schulte)	visual buffer. Worked with Silver Creek Water District to install a new water tower. Important cooperative project for both DoF and the water district.
Deam Lake Recreation Area (Schulte)	The Deam Lake Recreation Area is about 1,300 acres. The lake is about 193 acres and is open to non-motorized use. It has a campground for RVs and tents as well as a very nice Horse Camp with stables.
Outbrook Ravine Nature Preserve (Schulte)	Newly created Nature Preserve dedicated January 2018. This Nature Preserve wraps around the Virginia Pine-Chestnut Oak Nature Preserve on three sides. There are two endangered species with known occurrences in the new Nature Preserve (NP). Steep and highly erodible slopes throughout most of the NP.
Tract C10T11, Sale 6301802, 205 acres (Jacqmain)	Sale offered in 2 prior bids but not yet sold. Previous sale #6301805. 100-acre sale area. Stand has low volume, low quality. RMZ issues/concerns as an intermittent stream runs largely parallel to road bordering southern line of sale. Knobstone Trail and horse trails as considerations. Loggers communicate that it is not financially feasible as marked and laid out. Looking at new ways to manage stand to meet silvicultural objectives. Considering remarking the sale, bundling with nearby areas, improving access. Initial locations for log landings directly adjacent to streams. Discussions: BMPs, tree marking, silviculture, recreation regulations/rules.
Tract C8T1,2, Sale 6301402, 140 acres (Jacqmain)	TSI contract planned for 4 patchcuts totaling 10 acres. All within the 140-acre area thinned in 2016. Regeneration patch cuts arranged along existing horse trails TSI work has been contracted, contract provided. Contractor requested and received an extension due to wet and rainy weather. From the thinning harvest, timber sale administrator notes: a number of issues that were rectified or remediated as follows: Noted water bars not installed on horse trail and required remediation and was fixed by the logger. Admin required logger to remove tops from creek. 5/27/16 inspection noted excessive rutting and skidding damage and required remediation. Penalty given for damage to high quality black oak along main haul road and stopped sale.
Wildlife Project area, 50 acres (Jacqmain)	Wildlife Project Management Area adjacent to previous tract, described above. Similar cover type that had been harvested about 15 years ago. Discussions: RTE, snags, trails.
Horse trail into Tract C8T1/2 (Jacqmain)	Water flow and sediment run-off evident along horse trail. Staff were knowledgeable about procedures, next steps, and routine to address trail damage. Discussions: Horse clubs and partnerships to repair trails, trail BMPs.
Tract C1T8, Sale 6301701, 115 acres (Jacqmain)	Smith Road completed thinning done July 2018. Landing inspection. Intermittent stream and BMP review. Sale administration inspection noted a hydraulic hose blow out was cleaned with absorbent spill. Pine removed with some pine regeneration in stand. Discussions: Biodiversity, Compartment Review, Trails.
<b>23 October 2018, Tuesday, Harrison-Crawford State Forest</b>	
Harrison-Crawford SF Office	Abbreviated opening meeting: standards, audit type, audit evidence, work hours, safety considerations for the audit, confidentiality, site selections.
Browns field planting (Schulte and Jacqmain)	Fields of warm season grasses. Plantings with oak and hickory in 2014 and 2016. Project conducted in conjunction with The Indiana Tree Project (TITP). Planting occurred adjacent to an experimental area that was direct seeded in 1991. After a good acorn crop the area was tilled and the acorns were spread. There has been some success. The recently planted area has been sprayed.
Fox Hollow Fire Trail (Schulte and Jacqmain)	The fire trail is a good graveled road. The trail also provides access for disabled hunters.
Tract C20 T8, Sale 6341804 (Schulte and Jacqmain)	Salvage of ash and a few dead and dying hardwoods. Previously cut in 2008/9. Then noticed a lot of ash when revisiting. There was little value in the harvest so the sale was not purchased. This is unusual in that it was not sold as standing timber but as a log sale. As a result, the harvest was cut and stacked by staff. The staff also applied BMPs. Sprayed for stilt grass. Seeded log yard and skid trails. Foresters try to GPS ailanthus and other invasives. Training is provided through annual training and on the job. Training also occurs with workshops by SAF and TNC. The annual pesticide training includes training on invasives.

Isaac's Bottom (Schulte and Jacqmain)	Area was planted with pine and poplar in the 1970s. The old farm was also planted with autumn olive around tree plantings. Sprayed the stilt grass along the powerline with an ATV sprayer. Knocked back the autumn olive along the fire trail/disabled hunter trail. One of the reasons to address this area is because it is highly visible and an opportunity to educate the public. Staff planned to cover this project during the open house but that was delayed.
Tract C29 T2 & 10, Sale 6341805 (Schulte and Jacqmain)	Hardwood thinning. Marked and sold. The area was last cut in 1998. In consideration of aesthetics put in a parallel skid trail away from the road. Existing opening from 1998 had good yellow poplar regeneration. Leaving oak and shag bark hickory seed trees. Fire damage on several trees from a fire in the late 1800s. Observed several Ailanthus that were mark for future removal.
Tract C28 T2, Sale 6341702 (Schulte and Jacqmain)	In 2003 the area was marked and put on hold. In 2004 there was wind storm salvage. Noticed a lot of ash two years ago so put together a sale that started harvest in November 2017. Had to stop operations because of bat restrictions. Will complete harvest this winter. Inspected area that was avoided during wetter time of year to prevent damage. Because of aesthetics had tops moved off yard and away from trails. Cultural sites avoided.  The area has a lot of recreational use in the form of hiking and horse trails. It is adjacent to the Deam Bluff Nature Preserve that was designated because of wood rat.
Tract C30 T7, Sale 6341803 (Schulte and Jacqmain)	Originally had a sale in the area about 2014. Since that time there was some blowdown that needed to be cleaned up. It wouldn't sell as a salvage job so staff cut the trees and donated to the State Fair. Even though this operation conducted by staff inspections were still performed. On the way to this site passed the Cold Friday and the Greenbrier Cemeteries. The Harrison County Cemetery Restoration group worked with DoF staff to restore both cemeteries in September 2017.
Tract C31 T5 Sale 6341602 (Schulte and Jacqmain)	Sale completed spring 2018. About 230 acres of ash, poplar, and sassafras in old fields. Thinning with openings. Goal to capture the ash. Cultural site marked out of sale area.
Tract C31 T3 (Schulte and Jacqmain)	This sale is in the process of being marked in the pine and hardwood stand. Significant cultural site located when conducting survey for planned landing. Forester relocated landing as a result. Originally the thought was to locate the landing away from the road for aesthetics but needed to relocate closer to the road due to survey results.
<b>Wednesday, 24 October 2018 Harrison-Crawford State Forest</b>	
Tract C12 T7 Sale 6341802 (Schulte and Jacqmain)	Open sale of about 6 acres focused on cedar pockets. Goal is to shift the stand from cedar to oak hickory. Review of inspection notes identified a spill that was handled immediately and appropriately. The remnants were removed prior to an incoming storm.
Tract C12T7, Sale 6341802, 10 acres (Jacqmain)	Contract still active. 10-acre sale area had been harvested and this was a re-entry to clean out retained cedar to improve conditions for existing regeneration. Stilt grass and tree of heaven invasives in openings. Some treatment (spray) had been done by forester. Discussion: invasives training.
Tract 1602 Fire trail (Jacqmain)	Road construction project through W3 stand. Fully ditched and crowned. Good condition. Ditching, turnout, culvert inspections.
Tract C18 T3 Sale 6341603 (Schulte and Jacqmain)	Two activities in the area – 1) sale completed June 2016 and sale marked but not sold. After an inspection upon the completion of the sale in 2016 quite a bit of cedar was found so marked that to put out for another sale. The sale in 2016 avoided the Blue River with a 200' buffer. Although some volume could have come out of the buffer according to BMPs, the slope was steep and therefore avoided. Forester called in Archeologist after noticing potential archeological sites near sale area that were not previously identified.
Leavenworth Barrens Nature Preserve (Schulte and Jacqmain)	About 750-acre preserve established because of barrens and glades. Parts had been planted with pine at one time so have conducted some harvest to restore to prairie and barrens.
Tract C16 T2 Sale 6341801 (Schulte and Jacqmain)	Hardwood with areas heavy to pine so harvest includes openings to return to hardwood stand. Thinning with several openings in the sale area. Cultural site that had a 100' buffer applied. Planning to follow up with TSI to get the red maple and poplar.

Scout Mountain (Schulte and Jacqmain)	1.2-acre test plot of Mendelian-hybrid American Chestnut plantings conducted by Purdue. In 2014 Purdue was looking for an area to run the experiment so Harrison-Crawford staff worked with them to find and clear an area. The plantings are of various levels of resistance. The experiment is ongoing.
Harrison-Crawford State Forest Office	Closing Meeting Preparation: Auditor(s) take time to consolidate notes and confirm evaluation findings
Harrison-Crawford State Forest Office	Closing Meeting: Review preliminary findings (potential non-conformities and observations) and discuss next steps.

## 2.2 Evaluation of Management Systems

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

## 3. Changes in Management Practices

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

## 4. Results of Evaluation

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### 4.1 Definitions of Major CARs, Minor CARs and Observations

*Major CARs:* Major nonconformances, either alone or in combination with nonconformances of all other applicable indicators, result (or are likely to result) in a fundamental failure to achieve the objectives of the relevant FSC Criterion given the uniqueness and fragility of each forest resource. These are corrective actions that must be resolved or closed out before a certificate can be awarded. If Major CARs arise after an operation is certified, the timeframe for correcting these nonconformances is typically shorter than for Minor CARs. Certification is contingent on the certified FME’s response to the CAR within the stipulated time frame.

*Minor CARs:* These are corrective action requests in response to minor nonconformances, which are typically limited in scale or can be characterized as an unusual lapse in the system. Most Minor CARs are the result of



nonconformance at the indicator-level. Corrective actions must be closed out within a specified time period of award of the certificate.

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

### 4.2 History of Findings for Certificate Period

FM Principle	Cert/Re-cert Evaluation	1 <sup>st</sup> Annual Evaluation	2 <sup>nd</sup> Annual Evaluation <i>No findings issued</i>	3 <sup>rd</sup> Annual Evaluation	4 <sup>th</sup> Annual Evaluation
P1					
P2					
P3					
P4	Obs 4.4.a; 8.1				
P5		Obs 5.1.a			
P6					
P7		Obs 7.3.a, Obs 7.4.a			
P8					
P9					
P10					
COC for FM		Obs 1.15			
Trademark					
Group					
Other					

### 4.3 Existing Corrective Action Requests and Observations

<b>Finding Number: 2017.1</b>	
<b>Select one:</b> <input type="checkbox"/> Major CAR <input checked="" type="checkbox"/> Minor CAR <input type="checkbox"/> Observation	
<b>FMU CAR/OBS issued to</b> (when more than one FMU):	
<b>Deadline</b>	<input type="checkbox"/> Pre-condition to certification/recertification <input type="checkbox"/> 3 months from Issuance of Final Report <input checked="" type="checkbox"/> 12 months or next audit (surveillance or re-evaluation) <input type="checkbox"/> Observation – response is optional <input type="checkbox"/> Other deadline (specify):
<b>FSC Indicator:</b>	FSC-STD-50-001, 1.15
<b>Non-Conformity</b> (or Background/ Justification in the case of Observations): The standard timber sale contract template used by the Indiana DNR includes the use of “FSC” without the corresponding trademark symbol. As a public-facing document, this is considered a trademark use.	

<b>Corrective Action Request (or Observation):</b>	
The use of the FSC “checkmark-and-tree” logo shall be directly accompanied by the trademark symbols ® or ™ (in superscript font). The symbol, which represents the registration status of an FSC trademark in the country in which FSC certified products or materials are to be distributed, is an intrinsic part of the logo. The appropriate symbol shall also be added to “FSC” or “Forest Stewardship Council” for the first use in any text. The registration status of the FSC trademarks for the US is listed in Annex 1.	
<b>FME response</b> <i>(including any evidence submitted)</i>	The checkmark- and- tree logo was removed from the Timber Sale Agreement. Registration marks have been added to the word logos. Also submitted were two executed agreements demonstrating that the updated form has been implemented. Documents provided in email dated 17 October 2018: <ul style="list-style-type: none"> <li>• Timber Sale Agreement 2018, Word document – Revised, updated 2018 version of the “Template for Letter of Agreement For Sale of Timber on State Forest Land” used to timber harvests from Indiana State Forests.</li> <li>• 20181005130719921, PDF document – Copy of an executed Martin County contract for timber sale #6361804.</li> <li>• 20181005130557972, PDF document– Copy of an executed Owen County contract for timber sale #6381801.</li> </ul>
<b>SCS review</b>	The SCS audit team reviewed the above-named documents and confirmed acceptable use of FSC trademark and logo. Interviews in the field confirmed staff knowledge and implementation to use the newest available template. These corrective actions justify closure of this CAR.
<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)

#### 4.4 New Corrective Action Requests and Observations

No new corrective actions were issued.

### 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 FME 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).

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.

### 5.1 Stakeholder Groups Consulted

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. Stakeholder groups who are consulted as part of the evaluation include FME management and staff, consulting foresters, contractors, lease holders, adjacent property owners, local and regionally-based social interest and civic organizations, purchasers of logs harvested on FME forestlands, recreational user groups, tribal members and/or representatives, members of the FSC National Initiative, members of the regional FSC working group, FSC International, local and regionally-based environmental organizations and conservationists, and forest industry groups and organizations, as well as local, state, and federal regulatory agency personnel and other relevant groups.

### 5.2 Summary of Stakeholder Comments and Evaluation Team Responses

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.

Stakeholder Comment	SCS Response
<p>On a DNR sale held adjacent to my land, the logger ran over the line and then rutted our property.</p>	<p>The property in question was in a different part of the state from the area which had been selected for sampling, so the audit team was unable to examine the specific property in question. However, the audit team examined IDNR staff policies, interviewed staff, and specifically examined all field sites for rutting during the 2018 audit. Additionally, auditors monitored along harvest edges with adjacent neighbors for evidence of any boundary trespass done by harvesters, none was observed.</p> <p>The “Indiana Forestry BMP Rutting Guidelines” (September 2015) are considered part of an overall Best Management Practices (BMP) program. These BMPs are applied to all timber harvests/sales that are conducted on DNR State Forest lands. The DNR introduced the new rutting guidelines in 2015. During the 2018 audit, when interviewed, forestry field staff demonstrated knowledge of 2015 Guidelines, how to implement protective BMPs with harvest operators in the field, and knew how to properly conduct post-harvest inspections. SCS will reach out to this landowner when sampling is conducted in this part of the state again.</p> <p>There were no instances of rutting found during the audit except for Tract C8T1,2, Sale 6301402 where rutting was discovered during harvest monitoring, immediately recognized, and corrected. Overall, the audit team found the management system of the IDNR to be effective in training staff and ensuring</p>

	<p>supervision during activities at risk to causing soil damage and related impacts on productivity. Although no non-conformity is warranted and given the high value of log produced on equally high productivity of soils in several of the state forests, SCS auditors will continue to monitor performance of avoidance, prevention, detection, and corrections around rutting and soil compaction impacts related to timber harvesting.</p>
<p>The DNR brought stilt grass into the interior of the forest near where I go into the forest. What are they doing to stop spreading stilt grass around in the State Forests?</p>	<p>Indiana DNR must conform to FSC US Forest Management indicator 6.3.h which states, “The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control invasive species, including: 1. a method to determine the extent of invasive species and the degree of threat to native species and ecosystems; 2. implementation of management practices that minimize the risk of invasive establishment, growth, and spread; 3. eradication or control of established invasive populations when feasible: and, 4. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species.</p> <p>Japanese stilt grass produces a highly transportable seed and may be spread by ATVs and other vehicles, machinery, hiking boots, deer, and domestic animals to list a few examples. Even water has been found to be a vector (e.g., a source of spread), <a href="https://www.invasivespeciesinfo.gov/profile/japanese-stilt-grass">https://www.invasivespeciesinfo.gov/profile/japanese-stilt-grass</a>.</p> <p>During the development of the management guide for any tract for IDNR, an Ecological Resource Review form, Section 5, is filled out which includes a section specifically for non-native Invasive species where such species are listed including management actions. These species, along with management and monitoring actions, are most often also included in the management guide.</p> <p>In addition to the regular efforts, in State Forests hire interns to conduct invasive species control projects. The Division received a federal Joint Chiefs grant along with NRCS and, for some State Forests, who receive additional federal funds for native species restoration (such as oak forest restoration with National Forest). DoF uses a portion of those funds for invasive species control to enhance oak regeneration. In 2018, auditors visited an area, “Tract C12T7, Sale 6341802” where the forester had sprayed stilt grass. Forestry staff, when interviewed, demonstrated awareness and knowledge of the species identification and treatment options.</p> <p>Treatment of invasives include not only stilt grass, but also multiflora rose, bush honeysuckle, Japanese honeysuckle, kudzu, and wisteria. For prevention, DoF has set up education kiosks and displays for users at trailheads, campgrounds and offices. In addition, IDNR may require equipment cleaning if sufficient risk is determined to be present from management activities. The DNR has done so once a timber sale where invasives were already present but DNR sought to reduce the risk of introducing new invasives. DNR points out</p>

	<p>that equipment cleaning is required in TSI contracts (Timber stand improvement).</p> <p>There were no non-conformities related to this indicator, however, in follow up interviews for this question, staff expressed concern about budget support for monitoring and treatment activities in the future. For this reason, future FSC audits should monitor this topic area.</p>
<p>Prior to 2005 DNR designated "old forest areas". Was dropped in last Strategic Plan. Why did the DNR stop using this 2005 designation?</p> <p>Old forest areas were areas designed to simulate old growth forest conditions. I know old forest areas will never be true old growth forests but we could approach it (Type 2 OG). Why aren't we using old forest areas and what are we doing to create new "old growth" forests?</p>	<p>The designation of 'old forest areas' was not part of the 2008-2013 strategic plan as stated in this comment, nor is it used in the current strategic plan. This designation and changes to that approach occurred prior to certification. The approach now in place has been found in conformity with the standards. It is important to note that DNR lands, with few exceptions, were generally tax delinquent agricultural lands that had largely been cleared of timber prior to any DNR ownership.</p> <p>As to the question, of what is Indiana DNR doing to create "new old-growth" forests, the DNR has to conform with 6.3.a.1, 6.3.a.3, as well as 9.1.a under the FSC US FM standard which include references to old growth trees and forests. Relative to these indicators, FSC audits done this year, and in years prior, inform the following summary:</p> <p>The DNR DoF is constrained to manage State Forests under a Strategic Management plan. The current 2015-2019 strategic plan has this goal related to old forests: <a href="http://www.in.gov/dnr/forestry/3605.htm">http://www.in.gov/dnr/forestry/3605.htm</a>, "Work toward a long term balance in forest stand ages and structure with 10% of forest acreage in or developing older forest conditions (e.g. nature preserves and high conservation forests) as well as 10% in early successional, young forests (0-20 years old).</p> <p>Many areas within the state forests have been designated for the development of mature forest conditions, such as nature preserves and research sites. This information has been detailed in prior year FSC audit reports and include:</p> <ul style="list-style-type: none"> <li>• Nature Preserves on State Forests being allowed to develop into late seral forest communities.</li> <li>• Control units (no harvest) of Hardwood Ecosystem Experiment (HEE). Three units at about 200 acres each.</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> </ul> <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 used 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 1 or 2. DoF has other</p>

	<p>areas on the forests that are being managed for late serial conditions, but do not yet meet the definition of Type 2.</p> <p>DoF has no identified old growth, however, DNR does annual checks for old growth based on Forest Inventory and Analysis (FIA), Continuous Forest Inventory (CFI) data, and historical tract records.</p>
<p>What is the long-term vision about climate change, mature forests will be critical in that scenario? What is the DNR doing to create and keep mature forests to mitigate against climate change?</p>	<p>The vision for this is included in the “IDNR Division of Forestry Strategic Direction 2015-2019”, which is the Division of Forestry (DoF) state-wide strategic plan, which may be found <a href="#">here</a>. Within this plan the DoF lays out Mission and Vision which are then broken down into Goals and Objectives. Goal #1 under Forest Resource Stewardship, page 4, includes the following statement, “The Division will also consider the potential for climate change to affect forest resiliency and opportunities to incorporate climate change considerations into decision making. The Division will also monitor EPA’s Electric Utility Generating Units (EGU’s) pursuant to Section 111(d) of the Clean Air Act to better understand if trees and forests can provide a source of carbon sequestration.” This section then outlines specific actions and targets that are consistent with current scientific understanding of contributions that well-managed forests can make towards carbon sequestration.</p> <p>Although mature forests have a contributing role in mitigation against climate change, there are far more pieces to the forest that influence overall climate change mitigation. For example, the FAO, or The Food and Agriculture Organization, of the United Nations produced a publication, “Managing forests for climate change” (I1960E/1/11.10, 2010). It includes description of forest management activities that conserve carbon stocks in forests including: sustainable practices of forest management and use; integrated fire management; management of forest health and vitality; management of forest biodiversity; management and extension of protected areas.</p> <p>The goals and objectives in the DoF Strategic Plan are copied below and are both effective and consistent in conservation of carbon stocks of the FAO listed activities above. These goals and objectives are provided on pages 4-6 of the Plan. It is important to note, this response is including only the results from Goal #1 when in fact, numerous portions of the strategic plan address aspects of forest management that positively impact forest health and resilience to foster forest ecosystem composition, structure, and function within the landscape. It is the assessment of the FSC audit team, that the detailed lists of goals and objectives included in the strategic plan fully support and are consistent with professional and science-based understandings of the role forest management plays in a comprehensive program for climate change.</p>
<p>The DNR cites studies that show bats are using openings but presence is not recovery of a crashing population.</p>	<p>DoF has an effective program to protect threatened and endangered species working closely with the Division of Nature Preserve, and their associated biological staff. Additionally, the DoF employs a full time Forestry Wildlife Specialist who has been working closely with the US Fish and Wildlife Service (USFWS) on necessary bat conservation plans.</p>

<p>They are overstating the implications of the results of those studies. We don't know long-term effects. Presence is not equal to reproductive success. What is the DNR doing about bats?</p>	<p>DoF has been working on an Indiana Bat Habitat Conservation Plan (HCP) with the USFWS for some time. In the meantime, DoF applies its interim guidelines for federally listed bats, including the Indiana bat. DoF Forestry Wildlife Specialist indicates that other bat species may be at risk due to White-nose syndrome and that it awaits further information from cooperating organizations and federal approval of its submitted HCP and Environmental Assessment.</p> <p>It is important to note that the Indiana DoF is not tasked with directly managing bat populations; however, DoF are responsible for maintaining (or improving) bat habitat during forest management activities on State Forests, while minimizing risk of take to federally listed species. Recent 'crashing populations' have been attributed to the spread of white-nose syndrome (WNS), an exotic fungal pest, which bats contract during hibernation. On State Forests, bat hibernation typically occurs in caves, so-called 'hibernacula'. For this reason, the DoF has closed recreational use of all caves on State Forests to help slow the spread of WNS. The USFWS (who is responsible for managing the most imperiled species) has recommended this action as an important step for managing declining bat populations.</p> <p>It has been acknowledged that for existing, healthy bat populations forest management has resulted in quality bat habitat throughout the United States. The key threat, again, is WNS. However, DNR follows guidance for protecting known bat roosting trees and critical habitat areas. All foresters interviewed during the audit demonstrated knowledge and familiarity with bat habitat management guidelines. Numerous examples were observed in the field of retention of preferred bat roosting species, such as shagbark hickory.</p> <p>The DNR has invested heavily in research and surveys over the past two decades to better understand how the forest management practices used in DoF forestry affect bat habitat suitability on State Forests. DoF staff agreed with the commenter that the long-term effects from forest management are not well-understood; for this reason, DoF has been a principal supporter to the long-term study of bat habitat use on State Forest through the Hardwood Ecosystem Experiment (<a href="https://heeforeststudy.org/">https://heeforeststudy.org/</a>). This research is important to ensure DoF forest management activities maintain or improve bat habitat suitability and provide support for bat populations using State Forests. One recent example of this research is Bergeson et al. (2018): "Managed forests provide roosting opportunities for Indiana bats in south-central Indiana." (Forest Ecology and Management, 427:305-316). This research focused on maternity roosting habitat, which the USFWS believes is an essential component to the management and survival of the species.</p>
<p>There is a rumor that due to budget the IDNR must log more, that unless they log, they won't</p>	<p>The amount of timber harvested on the State Forests is determined not by their budget, but on science and application of well-established and recognized professional forest management principles. Harvest levels are set based on estimates of growth and yield.</p>

<p>have funds to operate?</p>	<p>Currently, harvest levels are set at 10 million board feet (mmbf) per year which is 50% of the conservative estimate of annual growth (annual estimated growth is approximately 20 mmbf, adjusted down from 24 mmbf). This is a decrease of 4 mmbf from the previous harvest level of 14 million board feet and was adjusted based on better data generated from CFI plots and considering increased mortality from overaged stands, disease, and drought. The DoF bases harvest levels upon an in-depth forest inventory system used for management activity planning and scheduling.</p> <p>Indicator 5.6.a of the FSC US FM standard requires, <i>“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.</i></p> <p><i>The sustained yield harvest level calculation for each planning unit is based on: documented growth rates for particular sites, and/or acreage of forest types, age-classes and species distributions; mortality and decay and other factors that affect net growth; areas reserved from harvest or subject to harvest restrictions to meet other management goals; silvicultural practices that will be employed on the FMU; management objectives and desired future conditions. The calculation is made by considering the effects of repeated prescribed harvests on the product/species and its ecosystem, as well as planned management treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.”</i></p> <p>The overall harvest goal for the system (10 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 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.</p> <p>While budgeting supports these activities, the auditors found no evidence that harvest scheduling was driven by putting public timber proceeds into forestry budgets, rather auditors found that targets are objectively defined through a hierarchical process: 1) long-term resource analysis through state-level Strategic Plans, updated at 5 year intervals; 2) landscape-level objectives for forest management as established in the current plan; 3) 10-year property forest plans; and tract specific Resource Management Guides (RMG aka management plans). All aspects of the above have been examined and confirmed by audit teams.</p>
<p>Has there been real increase state-wide in logging over the last several years?</p>	<p>Evidence reviewed during the current and past audits does not show an increase in the timber harvested state wide on the State Forests. The harvest target has actually decreased in the past several years from 14 mmbf to 10 mmbf. The harvest target varies across time based on scientific forest</p>



	<p>inventory data. It reflects a percentage the volume of wood in the trees on the forest.</p> <p>It is important to note that the DoF has stewarded forests across Indiana in such a way that individual trees, on average, have grown larger, and thus have greater amounts of yield per tree relative to levels such as those found 10 years ago. In effect, the trees being harvested may have higher volumes (such as board feet) for the same number of trees or acres harvested.</p>
<p>What bothers me is we can't see an overall forest management plan for Yellowwood, Morgan/Monroe forests. I can see individual forest stand sales and I can find the state-wide strategic plan but if I want YMM State Forest views of the landscape, I have to go to a group outside the DNR.</p>	<p>Anyone can put in a public information request at any time per DoF's policy. The requests are reviewed on a case by case basis. Unless there is some legal reason (such as protecting a rare 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. FSC does not prescribe how public consultations must occur and have found the DNR to be in conformance with management plan consultations requirements.</p> <p>DNR has established stages of planning where public consultation opportunity is provided, this includes the following: 1) long-term resource analysis through state-level Strategic Plans, updated at 5 year intervals; 2) landscape-level objectives for forest management as established in the current plan; 3) 10-year property forest plans; and tract specific Resource Management Guides (RMG aka management plans). Additional opportunities are given through local, regional, and state-level consultations including on-line and public open houses. Consultation requirements for planning are met through these and a variety of other means.</p>

## 6. Certification Decision

<p>The certificate holder has demonstrated continued overall conformance to the applicable Forest Stewardship Council standards. The SCS annual evaluation team recommends that the certificate be sustained, subject to subsequent annual evaluations 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. Annual Data Update

<p><input type="checkbox"/> No changes since previous evaluation.</p>	
<p><input checked="" type="checkbox"/> Information in the following sections has changed since previous evaluation.</p>	
<p><input type="checkbox"/> Name and Contact Information</p> <p><input type="checkbox"/> FSC Sales Information</p> <p><input checked="" type="checkbox"/> Scope of Certificate</p> <p><input type="checkbox"/> Non-SLIMF FMUs</p> <p><input checked="" type="checkbox"/> Social Information</p>	<p><input checked="" type="checkbox"/> Pesticide and Other Chemical Use</p> <p><input type="checkbox"/> Production Forests</p> <p><input type="checkbox"/> FSC Product Classification</p> <p><input checked="" type="checkbox"/> Conservation &amp; High Conservation Value Areas</p> <p><input type="checkbox"/> Areas Outside of the Scope of Certification</p>

**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**

<input checked="" type="checkbox"/> FSC Sales contact information same as above.			
<b>FSC salesperson</b>			
<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	
<b># Group Members (if applicable)</b>		
<b>Number of FMUs in scope of certificate</b>		
<b>Geographic location of non-SLIMF FMU(s)</b>	<i>Latitude &amp; Longitude:</i>	
<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	158,264	
community managed	0	
<b>Number of FMUs in scope that are:</b>		
less than 100 ha in area	100 - 1000 ha in area	
1000 - 10 000 ha in area	more than 10 000 ha in area	1
<b>Total forest area in scope of certificate which is included in FMUs that:</b> Units: <input type="checkbox"/> ha or <input 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 (DNR), a state agency within the executive branch of the Indiana state government. DoF divides the FMU into State Forests (Properties). Each property is then divided into compartments, the next scale of land organization is tracts. Tracts are the primary land administration unit for management activity planning, monitoring and recordkeeping. Tracts may be composed of multiple forest stands for management, inventory and modeling purposes.

**Social Information**

<b>Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):</b>		
male workers: # 121	female workers: # 24	
<b>Number of accidents in forest work since previous evaluation:</b>	Serious: # 0	Fatal: # 0

**Pesticide and Other Chemical Use**

<input type="checkbox"/> FME does not use pesticides.				
<b>Commercial name of pesticide / herbicide</b>	<b>Active ingredient</b>	<b>Quantity applied since previous evaluation (kg or lbs.)</b>	<b>Total area treated since previous evaluation (ha or ac)</b>	<b>Reason for use</b>
Aquaneat	Glyphosate	2.1 gal	89.3 acres	Invasive, weed control
Aquathol K	Copperthanolamine complex	40 gal	6 acres	Weed control
Argos	Dipotassium salt of endothall	15 gal	3 acres	Weed control
Buccaneer	Glyphosate	13.9 gal	248.8 acres	FSI, invasives, weed control
Clethodim 2E	Clethodim	.02 gal	.1 acre	Invasives
Crossbow	Triclopyr, 2,4-D	1.1 gal.	20 acres	Invasives, weed control
Citrine Plus	Copper	2.5 gal	30 acres	Weed control
Drexel	Glyphosate	3.8 gal	37 acres	invasives
Element 4	Triclopyr	11.75 gal	215 acres	invasives
Fusion	Fluazifop	.02 gal	21.1 acres	invasives
Garlon 3a	Triclopyr	5.65 gal	63.9 acres	invasives
Garlon 4	Triclopyr	16.6 gal	329.6 acres	invasives
Glystar Plus	Glyphosate	4 gal	5 acres	invasives

Helosate Plus	Glyphosate	4.2 gal	8.2 acres	Invasives, weed control
Intensity	Clethodim	2 gal	14.5 acres	invasives
Mad Dog Plus	Glyphosate	56.1 gal	1,208.3 acres	Invasives, weed control
Milestone	Aminopyralid	1.9 gal	70.6 acres	invasives
Nautique	Copper ethylenediamine complex	30 gal	6 acres	Weed control
Oust	Sulfometuron-methyl	.02 gal	12 acres	Invasives, weed control
Pathway	Picloram, 2,4-D	1.7 gal	13.7 acres	Invasives, FSI
Plateau	Imazipic	4.75 gal	46.6 acres	invasives
Poast	Sethoxydim	22 gal	280.2 acres	invasives
Razor	Glyphosate	13.5 gal	23 acres	Invasives, weed control
Rodeo	Glyphosate	15.7 gal	88 acres	invasives
Roundup	Glyphosate	5.75 gal	33.5 acres	Invasives, weed control

### Production Forests

<b>Timber Forest Products</b>	<b>Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac</b>
Total area of production forest (i.e. forest from which timber may be harvested)	152,626
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	0
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	120
<b>Silvicultural system(s)</b>	<b>Area under type of management</b>
Even-aged management	183
Clearcut (clearcut size range 10-15)	26
Shelterwood	0
Other:	172
Uneven-aged management	2,238
Individual tree selection	0
Group selection	109
Other:	2,129

<input type="checkbox"/> Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	N/A
<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>Species in scope of joint FM/COC certificate: (Scientific / Latin Name and Common / Trade Name)</b>	
Acer spp	Maple: sugar, red, black, silver, boxelder
Aesculus spp	Ohio, yellow
Ailanthus altissima	tree of heaven
Asimina triloba	pawpaw
Betula nigra	river birch
Carya spp	Hickory: bitternut, mockernut, shagbark, red, pignut, shellbark, pecan
Carpinus caroliniana	Hornbeam
Catalpa speciosa	catalpa
Celtis occidentalis	hackberry
Cercis canadensis	eastern redbud
Cladrastis kentuckia	yellowwood
Cornus florida	flowering dogwood
Crataegus spp	hawthorns
Diospyros virginiana	persimmon
Fagus grandifolia	American beech
Fraxinus spp.	Ash: white, green, pumpkin, black, blue
Gleditsia triacanthos	honey locust
Gymnocladus dioica	Kentucky coffee-tree
Juglans spp	black walnut, butternut
Juniperus virginiana	red cedar
Larix laricina	tamarack
Liquidambar styraciflua	sweet gum
Liriodendron tulipifera	yellow-poplar
Maclura pomifera	Osage orange
Magnolia acuminata	cucumber magnolia
Morus spp	mulberry
Nyssa sylvatica	black gum
Ostrya virginiana	Eastern hophornbeam (ironwood)
Paulownia tomentosa	royal paulownia
Picea abies	
Pinus spp	Norway spruce
	Pine: white, red, Scotch, Virginia, shortleaf, jack, loblolly
Plantanus occidentalis	sycamore

Populus spp.	large-toothed aspen, quaking aspen, cottonwood
Prunus serotina	black cherry
Quercus spp.	Oaks: white, red, black, scarlet, post, bur, swamp chestnut, swamp white, chestnut, chinkapin, shingle, black jack, cherry bark, pin, shumard, overcup, northern pin
Robinia pseudoacacia	black locust
Salix nigra	black willow
Sassafras alfidum	sassafras
Taxodium distichum	bald cypress
Tilia Americana	basswood
Tsuga Canadensis	eastern hemlock
Ulmus spp	elms

**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
None		

**Conservation and High Conservation Value Areas**

<b>Conservation Area</b>	<b>Units:</b> <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac
<b>Total amount</b> of land in certified area protected from commercial harvesting of timber and managed primarily for conservation objectives (includes both forested and non-forested lands).*	<b>3,458.52 ac</b>

*\*Note: Total conservation and HCV areas may differ since these may serve different functions in the FME’s management system. Designation as HCV may allow for active management, including commercial harvest. Conservation areas are typically under passive management, but may undergo invasive species control, prescribed burns, non-commercial harvest, and other management activities intended to maintain or enhance their integrity. In all cases, figures are reported by the FME as it pertains local laws & regulations, management objectives, and FSC requirements.*

High Conservation Value Forest / Areas			Units: <input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac
Code	HCV Type	Description & Location	Area
HCV1	Forests or areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	Batwing Cave, Harrison-Crawford SF, (10 AC)	2176.3

		<p>Charles C Deam, Harrison-Crawford SF, (258.9 AC)</p> <p>Crooked Creek, Yellowwood SF, (35 AC)</p> <p>Scout Mountain, Harrison-Crawford SF, (40 AC)</p> <p>Leavenworth Barrens, Harrison-Crawford SF, (761.3 AC)</p> <p>Indian Bitter, Jackson-Washington SF, (35 AC)</p> <p>Outbrook Ravine, Clark SF (518.6 AC)</p> <p>Post Oak-Cedar, Harrison-Crawford SF, (266 AC)</p> <p>Countyline Glades, Harrison-Crawford SF, (84.6 AC)</p> <p>Ravinia Seeps, Morgan-Monroe SF, (25.4 AC)</p> <p>Pleasant Grove Valley, Owen Putnam SF, (64.2 AC)</p> <p>Jordan Creek Seep Springs, Owen-Putnam SF, ( 46.7 AC)</p> <p>Miller Ridge, Yellowwood SF, (30.6 AC)</p>	
HCV2	<p>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.</p>	<p>Countyline Glades, Harrison-Crawford SF, (84.6 AC)</p>	84.6

<p>HCV3</p>	<p>Forests or areas that are in or contain rare, threatened or endangered ecosystems.</p>	<p>White Oak , Clark SF,(143.1 AC)</p> <p>Virginia Pine-Chestnut Oak, Clark SF, (23.6 AC)</p> <p>Alum Cave Hollow, Clark SF (142 AC)</p> <p>Outbrook Ravine, Clark SF (518.6 AC)</p> <p>Post Oak-Cedar, Harrison-Crawford SF, (266 AC)</p> <p>Greenbrier Knob/River’s Ledge, Harrison-Crawford SF, (144.2 AC)</p> <p>Countyline Glades, Harrison-Crawford SF, (84.6 AC)</p> <p>Charles C Deam, Harrison-Crawford SF, (258.9 AC)</p> <p>Scout Ridge, Morgan-Monroe SF, (14.5 AC)</p> <p>Knobstone Glades, Jackson-Washington SF, (60 AC)</p> <p>Henshaw Bend, Martin SF, (77 AC)</p> <p>Tank Spring, Martin SF, (60 AC)</p> <p>Low Gap, Morgan-Monroe SF, (320 AC)</p> <p>Sweedy Hollow, Morgan-Monroe SF, (150.1 AC)</p> <p>Lucas Hollow, Yellowwood SF, (42.8 AC)</p>	<p>2,305.4</p>
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HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).		
HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).		
HCV6	Forests or areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).		
<b>Total area of forest classified as 'High Conservation Value Forest / Area'</b>			<b>3,445.7*</b>

*\*Note: Total area may not equal the sum of the various categories of HCV because some HCVF count under two or more categories of HCV.*

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

<input type="checkbox"/> <i>N/A – All forestland owned or managed by the applicant is included in the scope.</i>		
<input type="checkbox"/> <i>Applicant owns and/or manages other FMUs not under evaluation.</i>		
<input checked="" type="checkbox"/> <i>Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification.</i>		
<b>Explanation for exclusion of FMUs and/or excision:</b>	The Division of Forestry removed the developed campground areas at Starve Hollow State Recreations Area, Deam Lake State Recreation Area, and Greene-Sullivan State Forests.	
<b>Control measures to prevent mixing of certified and non-certified product (C8.3):</b>	The Division of Forestry developed maps delineating the excised areas. Any excised areas that may be harvested would have harvested wood kept strictly segregated.	
<b>Description of FMUs excluded from or forested area excised from the scope of certification:</b>		
<b>Name of FMU or Stand</b>	<b>Location (city, state, country)</b>	<b>Size (<input type="checkbox"/> ha or <input checked="" type="checkbox"/> ac)</b>
Stave Hollow State Recreation Area, Jackson- Washington SF	Vallonia, IN, USA	11 acres
Deam Lake State Recreation Area, Clark SF	Borden, IN, USA	73 acres
Greene-Sullivan SF	Dugger, IN, USA	30 acres

## 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 – Staff and Stakeholders Consulted

#### FME Staff Consulted

Company Name	State of Indiana Division of Forestry		
Location	Clark State Forest – October 22, 2018		
Type of Audit	Surveillance		
Opening Meeting Date	October 22, 2018	Closing Meeting Date	October 24, 2018

  

Name	Position	Attended Opening Meeting?	Attended Closing Meeting?
	r.bartlett@dnr.in.gov		
Ryan Bartlett	Forester 812-797-0292	yes	
Dustin Alwine	Forester dalwine@dnr.in.gov	✓	
John Friedrich	Property Program Specialist	✓	
Scott Haulton	wildlife biologist shaulton@dnr.IN.gov	✓	<del>✓</del>
Dan Ernst (Asst State Forester)	dernst@dnr.in.gov	✓	
Brewster Auler (Stewardship Coordinator)	bauler@dnr.in.gov	yes	
AJ Ariens	aariens@dnr.in.gov	yes	
Pat Cleary	Prop. mgr. pcleary@dnr.in.gov	yes	
Beth Jacobman	SCS/FSC Cert Forester	—	—

Company Name State of Indiana Division of Forestry

Location Harrison-Crawford State Forest – October 23, 2018

Type of Audit Surveillance

Opening Meeting Date October 22, 2018 Closing Meeting Date October 24, 2018

Name	Position & email	Attended Opening Meeting?	Attended Closing Meeting?
Elena Wilcoxson-HCSF	Resource Specialist ewilcoxson@dnr.in.gov	yes	
WAYNE WERNE	" " Wwerne@dnr.in.gov	YES	
Taylor Addison	" "@JWSF taddisson@dnr.in.gov	yes	
KEGAN TODT	" @JWSF KTODT@dnr.in.gov	yes	
AJ Ariens	aariens@dnr.in.gov	yes	
Dan Ernst	dernst@dnr.in.gov	yes	
John Seifert	Director Jseifert@DNR.IN.gov	yes	
John Friedrich	Property Program Specialist	yes	
Dwayne Sieg	Property Manager	yes	
Beth Jacquaman	SCS/FSC Cert Forester	x	x

Company Name State of Indiana Division of Forestry

Location Harrison-Crawford State Forest – October 24, 2018

Type of Audit Surveillance

Opening Meeting Date October 22, 2018 Closing Meeting Date October 24, 2018

Name	Position	Attended Opening Meeting?	Attended Closing Meeting?
Dwayne Sieg	Property Manager	x	x
John Seifert	State Forest	y	y
WAYNE WERNE	RESOURCE FORESTER	y	y
Dan Ernst	Assistant State Forester	y	y
Elena Wilcoxson	Resource Specialist	yes	yes
Brenda Huter	Forest Stewardship Coord	y	y
AJ Ariens	Forest Archeologist aariens@dnr.in.gov	yes	
John Friedrich	Property Program Specialist	yes	yes
Beth Jacquaman	SCS/FSC Cert Forester	x	x

**List of other Stakeholders Consulted\***

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.
Leslie Bishop, PhD	*Personal details confidential		Phone	Y
David LeBlanc, PhD	Dendrochronologist Ball State University	<a href="mailto:dleblanc@bsu.edu">dleblanc@bsu.edu</a>	Phone	N
Justin Maxwell, PhD	Dendrochronologist, Indiana University	<a href="mailto:maxweljt@indiana.edu">maxweljt@indiana.edu</a>	Phone	N

\* Note: SCS may maintain additional records of stakeholder consultation activities (e.g., email notifications) in its recordkeeping system. Stakeholders included in Appendix 2 have given their permission to include their name, contact details, and comments in the report. Anonymous stakeholders may have provided comments as a part of stakeholder outreach activities.

**Appendix 3 – Additional Evaluation Techniques Employed**

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

**Appendix 4 – Pesticide Derogations**

- There are no active pesticide derogations for this FME.

**Appendix 5 – Forest Management Standard Conformance Table**

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

**Requirements Reviewed in Annual Evaluation**

Evaluation Year	FSC P&C Reviewed
2016	All – (Re)certification Evaluation
2017	P1, P5, 6.3, P9
2018	P4, P5, P8, Group Std: C6, C7, C8; FSC-STD-50-001, 1.15
2019	
2020	

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

REQUIREMENT	C/NC	COMMENT/CAR
<b>Principle #1: Compliance with Laws and FSC Principles</b> <b>Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.</b>		
1.1 Forest management shall respect all national and local laws and administrative requirements.	NE	
1.2. All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.	NE	
1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	NE	
1.4. Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.	NE	
1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.	C	
1.5.a. The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the <b>Forest Management Unit</b> (FMU).	C	Evidence of conformance includes: <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. For example, majority of properties visited at Clark State Forest sites had gates to limit unauthorized access. Exceptions noted in Clark SF include firewood permits and designated accessible hunting access for disabled hunters.</li> <li>• ATVs are prohibited on State Forests, except for disabled hunters under permit.</li> <li>• Counties have a robust GIS layer, check to see adjacent landowner's for notification of relevant activities.</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. KT – 2 part time staff manage the reroute, blaze trees and update website, maps of reroutes online and posted at the site.</li> </ul>

		<p>Through interviews, document review, and field inspection the auditors confirmed all of the above occurring on the Clark and Harrison/Crawford State Forests during the 2018 audit.</p> <p>To ensure that State Forest timber harvests are accurate, post-sale audits are used to count stumps and verify that the final harvest conformed to the sale contract for every timber sale completed. The audits are intended to deter illegal harvest and avoid any allegations that foresters might be allowing loggers to take additional trees on the side. The 2016 Stump Audit report is available here, <a href="https://in.gov/dnr/forestry/files/fo-Stump_Audit_Report-2016.pdf">https://in.gov/dnr/forestry/files/fo-Stump_Audit_Report-2016.pdf</a>.</p> <p>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 2018 audit.</p> <p>DNR does allow some exceptions to access regulations. Notably for allowing disabled access via motorized vehicles in designated non-motorized area for recreational hunting.</p> <p>DNR's Law Enforcement Division (LED), <a href="https://secure.in.gov/dnr/lawenfor">https://secure.in.gov/dnr/lawenfor</a>, employs conservation officers who serve the public and protect the natural heritage of the state of Indiana. The division operates 10 law enforcement districts throughout the state. The Law Enforcement Division is Indiana's oldest state law enforcement agency, and one of the most diverse.</p> <p>The Law Enforcement Division also has an Investigations Section. These investigations are primarily focused on exploited or commercialized wildlife. They use a variety of techniques including specialized surveillance and undercover operations.</p> <p>Interviews with forestry staff in 2018 confirm that LED works in close cooperation to protect the state's natural resources from unauthorized and illegal use. FME reports in 2018 that there are No new timber trespasses. Illegal ATV use is an ongoing issue. The Division of Forestry has a process to deal with ongoing previous timber trespasses through our licensing forester: surveying lines, conducting timber appraisals, charging for lost timber. For illegal atv use, gates are maintained, and the</p>
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		Division of Forestry works with the Division of Law Enforcement.
<b>1.5.b.</b> If illegal or unauthorized activities occur, the forest owner or manager implements actions designed to curtail such activities and correct the situation to the extent possible for meeting all land management objectives with consideration of available resources.		<p>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 2018 audit. No ATV activity was observed during the assessment.</p> <p>DoF attempts to deal with unauthorized horse trails by hindering entrances to them and repairing existing authorized trails. Will also inform those using roads illegally of rules.</p> <p>Each year the DNR documents and reports Timber trespasses and illegal Off-Road Vehicle (ORV) or all-terrain vehicle (ATV) use. The Division of Forestry has a process to deal with timber trespasses through using a licensing forester: surveying lines, conducting timber appraisals, charging for lost timber. For illegal ATV use, gates are maintained, and the Division of Forestry works with the Division of Law Enforcement.</p>
<b>1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.</b>	NE	
<b>Principle #2: Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.</b>		
<b>2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.</b>	NE	
<b>2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.</b>	NE	
<b>2.3. Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.</b>	C	
<b>2.3.a</b> If <i>disputes</i> arise regarding tenure claims or use rights then the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If these good-faith efforts fail, then federal, state,	C	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 Clark and Harrison/Crawford State Forests during the 2018 audit. For example, in Clark State Forest issues encountered have included gun range and camp

<p>and/or local laws are employed to resolve such disputes.</p>		<p>ground issues. If encountered by forestry field staff, those issues/stakeholders are referred to the Property Manager.</p> <p>DoF staff regularly check boundaries for timber sales that about other ownerships. Additionally, they often apply a no-harvest buffer zone to these types of sales.</p> <p>There have been no new disputes since the last audit.</p>
<p><b>2.3.b</b> The forest owner or manager documents any significant disputes over tenure and use rights.</p>	<p>C</p>	<p>DoF tracks legal ownership and boundary disputes through the Property Specialist who may involve the staff surveyor. 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> <p>No existing or new tenure or rights disputes reported in the last year.</p>
<p><b>Principle #3: The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.</b></p>		
<p><b>3.1. Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.</b></p>	<p>C</p>	
<p><b>3.1.a</b> Tribal forest management planning and implementation are carried out by authorized tribal representatives in accordance with tribal laws and customs and relevant federal laws.</p>	<p>NA</p>	<p>There are no tribal lands within the FMU.</p>
<p><b>3.1.b</b> The manager of a tribal forest secures, in writing, informed consent regarding forest management activities from the tribe or individual forest owner prior to commencement of those activities.</p>	<p>NA</p>	<p>There are no tribal lands within the FMU.</p>
<p><b>3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.</b></p>	<p>C</p>	
<p><b>3.2.a</b> During management planning, the forest owner or manager consults with American Indian groups that have legal rights or other binding agreements to the FMU to avoid harming their resources or rights.</p>	<p>C</p>	<p>The DoF sends letters to both federally recognized and unrecognized tribes with ancestral connections to the State of Indiana during critical stages of planning and events. Strategic Plan is a critical stage. If a case of sensitive area, then would consult with any potential or applicable tribes, so the absolute number consulted may vary to single or multiple consultations. Has not happened yet but procedures are place. Evidence of this was confirmed during prior years.</p>



	<p>The DNR holds a position on the Indiana Native American Indian Affairs Commission (INAIAC). Established under Indiana Code 4-23, the Commission meets quarterly to discuss, study, and make recommendations to the appropriate federal, state, and local governmental agencies in areas of concern of the State’s Native and non-Native people and communities. Currently the Commission includes seventeen individuals (8 representing Native Tribes/Nations, 7 representing State agencies, the Present Pro Tempore appointee, and the Speaker of the House appointee). The objective of the Commission is to bring together Native communities, to assist in identifying and providing opportunities to the community, and to enhance social, cultural, community, and economic development in Indiana.</p> <p>The Director of the DNR is one of the members of the Commission. The Division of Forestry at times works through the Commission to seek guidance in regard to consultation with tribal representatives when circumstances are brought to the Division’s attention concerning known sites of current or traditional cultural, archaeological, ecological, economic, or religious significance. The Commission also thus serves as a means for Native American tribes or individuals to express concern or interests to the DNR regarding the Division’s activities, procedures, and/or land holdings.</p> <p>Additional information regarding links to upcoming events, resources, news releases, public meetings, information about the Commissioners may be found on the INAIAC website, <a href="http://in.gov/inaiac/2345.htm">http://in.gov/inaiac/2345.htm</a>.</p> <p>The DNR has also worked to develop a plant permitting process for collection of plant materials, <i>Native American Plant/Tree Material Collection For Medicinal Or Ceremonial Purpose On Indiana Department Of Natural Resources Property</i>, <a href="https://secure.in.gov/inaiac/files/Native_American_Plant_Tree_Collection_Process_Overview.pdf">https://secure.in.gov/inaiac/files/Native_American_Plant_Tree_Collection_Process_Overview.pdf</a>. An approved Collection Permit may allow collection of plant/tree material from any permittee-requested DNR property, e.g., State Forest, Fish and Wildlife Area, or State Park. The Manager at the Salamonie River SF is currently working on a request for hickory saplings, as reported during the 2018 audit.</p>
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		<p>Northern Indiana has seen an increased in receiving input from tribal representatives. Specific examples were provided by the Indiana DNR whose confidentiality is being respected. Auditors note from interviews and documentation that are multiple active, proactive, and involved tribal groups engaged in DNR activities.</p>
<p><b>3.2.b</b> Demonstrable actions are taken so that forest management does not adversely affect tribal resources. When applicable, evidence of, and measures for, protecting tribal resources are incorporated in the management plan.</p>	<p>C</p>	<p>DoF continues to identify and protect archeological sites on DoF lands. In 2018, DoF identified and appropriately documented several sites as confirmed by documentation review and interviews with staff foresters and Forest Archaeologist. Forestry staff made available documentation for pre-management activity reviews for all sites visited during the audit (see Audit Itinerary for detailed listing of Compartment/Tracts and State Forests visited). In all case, with no exceptions, these reviews were completed prior to commencement of management activities. Several examples during the 2018 audit demonstrated management operations on the ground were altered to protect tribal or other historic resources, see Site Notes.</p>
<p><b>3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.</b></p>	<p>C</p>	
<p>3.3.a. The forest owner or manager invites consultation with tribal representatives in identifying sites of current or traditional cultural, archeological, ecological, economic or religious significance.</p>	<p>C</p>	<p>The Indiana Department of Natural Resources holds a position on the Indiana Native American Indian Affairs Commission. Established under Indiana Code 4-23, the Commission meets quarterly to discuss, study, and make recommendations to the appropriate federal, state, and local governmental agencies in areas of concern of the State’s Native and non-Native people and communities. Currently the Commission includes seventeen individuals (8 representing various Native Tribes/Nations, 7 representing State agencies, the Present Pro Tempore appointee, and the Speaker of the House appointee). The objective of the Commission is to bring together Native communities, to assist in identifying and providing opportunities to the community, and to enhance social, cultural, community, and economic development in Indiana.</p> <p>The Director of the Department of Natural Resources is one of the members of the Commission. The Division of Forestry will work through the Commission to seek guidance in regard to consultation with tribal representatives when circumstances are brought to the Division’s attention concerning known sites of current or traditional cultural, archeological, ecological, economic, or religious significance. The Commission also thus serves as a</p>

		means for Native American tribes or individuals to express concern or interests to the DNR regarding the Division’s activities, procedures, and/or land holdings.
<b>3.3.b</b> In consultation with tribal representatives, the forest owner or manager develops measures to protect or enhance areas of special significance (see also Criterion 9.1).	C	As no sites were identified by tribal representatives, the DOF has adopted its own protection measures of archaeological sites. Recent communications were made that had resulted from 2017-2018 Salamonie SF planning processes.
<b>3.4. Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.</b>	C	
<b>3.4.a</b> The forest owner or manager identifies whether <i>traditional knowledge</i> in forest management is being used.	C	DOF does not employ any traditional knowledge in its forest management.
<b>3.4.b</b> When traditional knowledge is used, written protocols are jointly developed prior to such use and signed by local tribes or tribal members to protect and fairly compensate them for such use.	C	DOF does not employ any traditional knowledge in its forest management.
<b>3.4.c</b> The forest owner or manager respects the confidentiality of tribal traditional knowledge and assists in the protection of such knowledge.	C	DOF does not employ any traditional knowledge in its forest management.
<b>Principle #4: Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.</b>		
<b>4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.</b>	NE	
<b>4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.</b>	C	
<b>4.2.a</b> The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).	C	<p>During the 2018 audit:</p> <ul style="list-style-type: none"> <li>• DoF takes active steps to ensure safety, such as:</li> <li>• Safety inspections from a DNR Safety Officer 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 2018, auditors observed DoF employees conforming to relevant safety protocols, interviews confirmed staff are knowledgeable and find the steps above to be routine.</p> <p>The Indiana Occupational Safety and Health Administration (IOSHA) handles workplace safety and health. IOSHA's Whistleblower Protection Unit works to maintain the integrity of the Indiana Occupational Safety and Health Act by protecting the rights that law gives to employees. Among these rights are the ability to file, without reprisal, safety and health complaints with a government agency or company management and the freedom to participate in an IOSHA inspection.</p>
<p><b>4.2.b</b> The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts or other written agreements include safety requirements.</p>	<p>C</p>	<p>DoF's timber sale agreement includes safety agreements. The TSI contract (4A TSI Bid-Contract under \$75,000) includes a section on compliance with all applicable federal, state, and local laws, including OSHA safety requirements. Timber harvest contract requirements were changed 1 January 2017, require a logger who has taken logger training (which includes safety) will have to be onsite during any logging operations on the state forest.</p>
<p><b>4.2.c</b> The forest owner or manager hires well-qualified service providers to safely implement the management plan.</p>	<p>C</p>	<p>DoF's timber sale agreement, see 4.2.b above, requires that at least one logger on each job site have at least complete Game of Logging (GOL) Level 1 training, and Best Management Practices (BMPs). Auditors also confirmed these records are available in a database maintained and available online here, <a href="https://www.in.gov/forestryexchange/INForestryX/FindaTrainedLogger.aspx">https://www.in.gov/forestryexchange/INForestryX/FindaTrainedLogger.aspx</a>.</p>
<p><b>4.3</b> The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labor Organization (ILO).</p>	<p>NE</p>	
<p><b>4.4.</b> Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.</p>	<p>C</p>	
<p><b>4.4.a</b> The forest owner or manager understands the likely social impacts of management activities, and incorporates this understanding into management planning and operations. Social impacts include effects on:</p> <ul style="list-style-type: none"> <li>• Archeological sites and sites of cultural, historical and community significance (on and off the FMU);</li> </ul>	<p>C</p>	<p>DoF uses the following approaches to understand social impacts and incorporate into management:</p> <ol style="list-style-type: none"> <li>1. Ongoing archaeological 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> </ol>

<ul style="list-style-type: none"> <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>4. Timber sales are offered at different scales (volumes) for different businesses, such as for TSI and invasive species control.</p> <p>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.</p> <p>6. Stewardship Meeting is an annual meeting open to all interest groups.</p> <p>The 2015-2019 Indiana Forestry Strategic Directions planning documents and process addresses social impacts. The DNR continues to hold State Forest open houses and online comment periods for management guides.</p>
<p><b>4.4.b</b> The forest owner or manager seeks and considers input in management planning from people who would likely be affected by management activities.</p>	<p>C</p>	<p>State Forest planning documents and resource management 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>The following were examined during the 2018 audit:</p> <p>1. For the Indiana Division of Forestry Strategic Plan, <a href="http://www.in.gov/dnr/forestry/files/fo-State_Forest_Strategic_Plan_2015_2019.pdf">http://www.in.gov/dnr/forestry/files/fo-State_Forest_Strategic_Plan_2015_2019.pdf</a>, Public Plan Input Process: The DoF goal is update the strategic plan approximately every 5 years. The DoF has a public input procedure, <a href="https://in.gov/dnr/forestry/files/fo-Public_Input_Procedure.pdf">https://in.gov/dnr/forestry/files/fo-Public_Input_Procedure.pdf</a> that describes the stakeholder solicitation process. This document provided detailed formats, public meetings, online access and other means by which the public could provide input for the proposed strategic plan. The 2016 auditors confirmed this process was followed. DoF also provided a summary of comments, and responses.</p> <p>2. The State Forests hold Open Houses: The properties provide information about upcoming property projects including timber sales. Guests can ask questions and/or provide comment directly to property staff. Comment cards are also available for people who prefer to provide a written statement or comment. Forestry staff will respond to specific questions. Past, current, and projected projects. Provided recreation, sale areas, and forestry education/games for children, District Foresters provided an informational display for private landowner application by topic areas in private land management. Advertised on website, Facebook page, and media news release. These</p>

		<p>schedules are posted online once approved. The 2018, and are provided here, note that the date of the news release must be used,  <a href="http://www.in.gov/activecalendar_dnr/EventList.aspx?view=EventDetails&amp;eventidn=21635&amp;information_id=50698&amp;type=&amp;syndicate=syndicate">http://www.in.gov/activecalendar_dnr/EventList.aspx?view=EventDetails&amp;eventidn=21635&amp;information_id=50698&amp;type=&amp;syndicate=syndicate</a> or  <a href="https://www.in.gov/dnr/4934.htm">https://www.in.gov/dnr/4934.htm</a>, 3. Forest Stewardship Coordinating Committee: At least once a year the Forest Stewardship Coordinating Committee convenes. Description of this group is here,  <a href="http://www.in.gov/dnr/forestry/6252.htm">http://www.in.gov/dnr/forestry/6252.htm</a>. The annual meeting is open to all groups with an interest in the forests of Indiana. The meeting attracts representatives from a range of organizations: professional forester groups, trail groups, environmental groups, wildlife groups, state and federal agencies. Topics for the meetings vary, but there is always time for groups to report on activities they are planning or items of concern. The DoF provided the agenda from the most recent committee meeting, “stewardship mtg 9-2016.pdf”. The group information and meetings times/locations are listed here,  <a href="http://www.in.gov/dnr/forestry/6252.htm">http://www.in.gov/dnr/forestry/6252.htm</a>.</p> <p>4. The Division of Forestry also has a place to ask questions or provide comment on the state DNR website:  <a href="http://www.in.gov/dnr/forestry/2856.htm">http://www.in.gov/dnr/forestry/2856.htm</a>. When comments are received, they are forwarded to the appropriate staff member to respond.</p> <p>Comments from management guides are reviewed and responses developed. The document is available on the DoF website.</p>
<p><b>4.4.c</b> People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action so that they may express concern.</p>	<p>C</p>	<p>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 or other communication on upcoming timber sales is a common practice.</p>
<p><b>4.4.d</b> 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</li> </ol>	<p>C</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.  Management planning documents, including upcoming timber sales, are made available to the public online. The</p>

<p>and/or comment on the proposed management;</p> <p>3. An accessible and affordable appeals process to planning decisions is available.</p> <p>Planning decisions incorporate the results of public consultation. All draft and final planning documents, and their supporting data, are made readily available to the public.</p>		<p>public can also access 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 disclosable document, they will get it from DoF.</p> <p>Based on comments in the media, Indiana’s 2015 Forestry Strategic Directions planning process, that vetted drafting and review in the elected Executive Branch and Governor-appointed NRC, troubles some interest groups that would like more direct involvement in all phases of plan development and review. The FSC standard does not, however, prescribe the methods an organization uses for public input. As noted previously, the 2015 Forestry Strategic Directions process involved three public meetings, and DoF commitment to address stakeholder input. The State Forest schedules for open houses each year is posted <a href="#">online</a>.</p> <p>The State Forest annual open houses, which have historically been part of the public input process were pending internal approvals at time of this audit and were approved following the field audit. Additionally, the state is developing an overall, comprehensive communications plan.</p>
<p><b>4.5. Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.</b></p>	<p>NE</p>	
<p><b>Principle #5: Forest management operations shall encourage the efficient use of the forest’s multiple products and services to ensure economic viability and a wide range of environmental and social benefits.</b></p>		
<p><b>5.1. Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.</b></p>	<p>NE</p>	
<p><b>5.2. Forest management and marketing operations should encourage the optimal use</b></p>	<p>NE</p>	

<p><b>and local processing of the forest’s diversity of products.</b></p>		
<p><b>5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.</b></p>	NE	
<p><b>5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.</b></p>	NE	
<p><b>5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.</b></p>	NE	
<p><b>5.6. The rate of harvest of forest products shall not exceed levels which can be permanently sustained.</b></p>	C	
<p><b>5.6.a</b> In FMUs where products are being harvested, the landowner or manager calculates the sustained yield harvest level for each sustained yield planning unit, and provides clear rationale for determining the size and layout of the planning unit. The sustained yield harvest level calculation is documented in the Management Plan.</p> <p>The sustained yield harvest level calculation for each planning unit is based on:</p> <ul style="list-style-type: none"> <li>• documented growth rates for particular sites, and/or acreage of forest types, age-classes and species distributions;</li> <li>• mortality and decay and other factors that affect net growth;</li> <li>• areas reserved from harvest or subject to harvest restrictions to meet other management goals;</li> <li>• silvicultural practices that will be employed on the FMU;</li> <li>• management objectives and desired future conditions.</li> </ul> <p>The calculation is made by considering the effects of repeated prescribed harvests on the product/species and its ecosystem, as well as planned management treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.</p>	C	<p>DoF current harvest target is 10 mmbf, which is approximately 50% of gross growth. The current growth estimate is based on the current State Forest CFI program implemented in 2008. Annual gross growth is estimated at 22 million board feet;</p> <p>The overall harvest goal for the system (10 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 most current 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 8th 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>State Forest harvest target is 10,mmbf. Actual harvest 2017/2018: 7.33 mmbf which includes 4.59mmbf of saw logs plus 5,480 cords converted to BF.</p>



<p><b>5.6.b</b> Average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level.</p>	<p>C</p>	<p>Note that calculations of growth rates and related harvest rates are continuously monitored through forest inventory data that is also informed by Continuous Forest Inventory (CFI) from across the State Forest lands.</p> <p>A CFI is where 1/5 of the land base is inventoried each year. After every 5 years are completed, DoF will start to re-measure the plots. This data enables robust analysis of growth computation. Comparisons may then be calculated. Over time, this data set will enable more precise and statistically-reliable growth estimate. The IDNR’s CFI system is considered robust. The system design is based on 10 year periods to inform reliable growth estimates.</p> <p>Timber Sale Volumes Sold &amp; Target Volumes in the Past Years:</p> <table border="1" data-bbox="836 798 1547 1423"> <thead> <tr> <th>Fiscal Year</th> <th>Sale Volume (mmbf)</th> <th>Target Volume (mmbf)</th> </tr> </thead> <tbody> <tr><td>2017-2018</td><td>7.33</td><td>10</td></tr> <tr><td>2016-2017</td><td>10.3</td><td>10</td></tr> <tr><td>2015-2016</td><td>7.1</td><td>14.34</td></tr> <tr><td>2014-2015</td><td>14.2</td><td>14.34</td></tr> <tr><td>2013-2014</td><td>17.1</td><td>16.7</td></tr> <tr><td>2012-2013</td><td>12.0</td><td>14.34</td></tr> <tr><td>2011-2012</td><td>14.4</td><td>14.5</td></tr> <tr><td>2010-2011</td><td>14</td><td>14.34</td></tr> <tr><td>2009-2010</td><td>10.6</td><td>12</td></tr> <tr><td>2008-2009</td><td>12.1</td><td>12</td></tr> <tr><td>2007-2008</td><td>11.3</td><td>12</td></tr> <tr><td>2006-2007</td><td>10.3</td><td>10.5</td></tr> <tr><td>2005-2006</td><td>7.7</td><td>7</td></tr> <tr><td><b>Total</b></td><td><b>148.43</b></td><td><b>162.06</b></td></tr> <tr><td><b>Average</b></td><td><b>11.42</b></td><td><b>12.47</b></td></tr> </tbody> </table> <p>Harvest records for the sites visited show that DoF does not exceed the calculated harvest rate; the average annual harvest rate 2005-2015 is 12.4 mmbf. 2015/2016 harvest target was 14.34 mmbf. For 2016/2017, this was reduced to 10.0 mmbf, based on CFI growth estimates, which remained unchanged for 2017/2018.</p>	Fiscal Year	Sale Volume (mmbf)	Target Volume (mmbf)	2017-2018	7.33	10	2016-2017	10.3	10	2015-2016	7.1	14.34	2014-2015	14.2	14.34	2013-2014	17.1	16.7	2012-2013	12.0	14.34	2011-2012	14.4	14.5	2010-2011	14	14.34	2009-2010	10.6	12	2008-2009	12.1	12	2007-2008	11.3	12	2006-2007	10.3	10.5	2005-2006	7.7	7	<b>Total</b>	<b>148.43</b>	<b>162.06</b>	<b>Average</b>	<b>11.42</b>	<b>12.47</b>
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<p><b>5.6.c</b> Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across the FMU. Overstocked stands and stands that have been depleted or rendered to be below productive</p>	<p>C</p>	<p>The combination of even- and uneven-aged management is used to produce mixed age classes and species. Regeneration harvests are used to generate young age classes of oak-hickory type. The goal of working towards 10% of the FMU in late seral conditions is consistent with</p>																																																

<p>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>some site characteristics, particularly on more mesic to wet-mesic sites with few oak-hickory species and associates.</p> <p>Because DoF is harvesting less than 50% of estimated <u>gross</u> 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. It is anticipated that the final cycle of fixed-plot continuous forest inventory will enable more accurate estimates of growth patterns across the resource base.</p>
<p><b>5.6.d</b> For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial operations or where traditional or customary use rights may be impacted by such harvests. In other situations, the forest owner or manager utilizes available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.</p>	<p>C</p>	<p>DoF does not have any significant commercially harvested NTFPs.</p>
<p><b>Principle #6: Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.</b></p>		
<p><b>6.1. Assessments of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.</b></p>	<p>C</p>	
<p><b>6.1.a</b> Using the results of <i>credible scientific analysis, best available information</i> (including relevant databases), and local knowledge and experience, an assessment of conditions on the FMU is completed and includes:          1) Forest community types and development, size class and/or successional stages, and associated <i>natural disturbance regimes</i>;          2) <i>Rare, Threatened and Endangered (RTE) species</i> and <i>rare ecological communities</i> (including plant communities);          3) Other habitats and species of management</p>	<p>C</p>	<p>There have been no changes to the environmental assessment since it was generated in 2008 but it is currently being updated by Forestry Wildlife Specialist. DoF's Environmental Assessment on the increased emphasis on management and sustainability of oak-hickory communities on the Indiana State Forest System 2008 documents items 1-6 for that community type, which is the dominant community type found in the State Forest System.</p> <p>The Natural Heritage Database which is part of the Natural Heritage Network, a worldwide system of Heritage</p>

<p>concern;</p> <p>4) Water resources and associated riparian habitats and hydrologic functions;</p> <p>5) <b>Soil resources</b>; and</p> <p>6) <b>Historic conditions</b> on the FMU related to forest community types and development, size class and/or successional stages, and a broad comparison of historic and current conditions.</p>		<p>Programs lead by <a href="#">NatureServe</a> is consulted in the development of a management guide for a tract. The Hardwood Ecosystem Experiment (HEE) <a href="https://heeforeststudy.org/">https://heeforeststudy.org/</a> is informing the State Forest EA and other aspects of the management program. Additionally, other environmental components (e.g., unique natural communities, important stand-level habitat features) are routinely evaluated during the Ecological Review process as management guides are developed.</p> <p>The Strategic Direction document identifies development of Wildlife Habitat Management Plans for each property. As this is a goal in the overarching document for the properties management the staff biologist will be focusing attention on these after the Bat HCP is completed. Information sources for development of the plans will come from the Natural Heritage Database, unique features identified by foresters in the field, and findings from the HEE.</p> <p>The history of the tract and consideration of soil resources are included in each management guide.</p>
<p><b>6.1.b</b> Prior to commencing site-disturbing activities, the forest owner or manager assesses and documents the potential short and long-term impacts of planned management activities on elements 1-5 listed in Criterion 6.1.a.</p> <p>The assessment must incorporate the <b>best available information</b>, drawing from scientific literature and experts. The impact assessment will at minimum include identifying resources that may be impacted by management (e.g., streams, habitats of management concern, soil nutrients). Additional detail (i.e., detailed description or quantification of impacts) will vary depending on the uniqueness of the resource, potential risks, and steps that will be taken to avoid and minimize risks.</p>	<p>C</p>	<p>Both short and long-term impacts for our management activities and the cumulative system-wide impacts are addressed in the 2008 State Forest EA. Tract-level assessments are also made in the Management Guide, and any expected deviations in impacts from what's described in the EA is detailed in the Management Guide. Even if no additional impacts are expected, environmental conditions (including RTE observations) are routinely evaluated during the development of the Management Guide.</p>
<p><b>6.1.c</b> Using the findings of the impact assessment (Indicator 6.1.b), management approaches and field prescriptions are developed and implemented that: 1) avoid or minimize negative short-term and long-term impacts; and, 2) maintain and/or enhance the long-term ecological viability of the forest.</p>	<p>C</p>	<p>Site level management guidelines have been developed for a number of T and E species (Indiana Bat, Timber Rattlesnake). <a href="#">Management Guidelines for Compartment-level Wildlife Habitat Features</a> have been developed and are applied.</p> <p>BMP's protect soil resources, riparian habitat, and long-term ecological viability of the forest. The bat guidelines developed for the Division of Forestry in conjunction with USFWS are implemented until the Bat HCP is finalized.</p>

<p><b>6.1.d</b> On public lands, assessments developed in Indicator 6.1.a and management approaches developed in Indicator 6.1.c are made available to the public in draft form for review and comment prior to finalization. Final assessments are also made available.</p>	<p>C</p>	<p>Management planning documents (drafts and final versions), including environmental impact studies, the State Wildlife Action Plan drafted collaboratively with the DNR Fish and Wildlife Division, and other assessments are made completely available to the public online. The public can also access publications and data on the website or upon request.</p> <p>Once DoF submits an updated HCP for Indiana bat conservation, it is required to undergo public review. First complete draft is done and reviewed by USFWS. It's currently under revision to be resubmitted to USFWS by end of 2018.</p>
<p><b>6.2</b> 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.</p>	<p>C</p>	
<p><b>6.2.a</b> If there is a likely presence of RTE species as identified in Indicator 6.1.a then either a field survey to verify the species' presence or absence is conducted prior to site-disturbing management activities, or management occurs with the assumption that potential RTE species are 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 101 state-listed animal species (on Indiana State Forest lands, the Indiana Bat, the Gray bat, and the Northern long-eared bat have the only endangered or threatened designation for fauna at the federal level).</p> <p>DoF participates in state and federal programs to research and protect RTE species.</p> <p>DoF actively uses the Division of Nature Preserves' Natural Heritage Database to screen for RTE species in management areas. RTE species locations are identified as part of the process of writing the resource management guide prior to management activities. If a species is detected in a database query management occurs with the assumption that potential RTE species are present, except in rare circumstances. One example of the exception was a 40-year-old detection of a RTE species and nothing since. The detection was still acknowledged in the management guide developed for the tract.</p> <p>An Environmental Assessment developed for the State Forests identifies threats to RTE species on the property.</p>

		<p>DoF employs a wildlife biologist who is engaged when a forester has a question or experiences an unusual wildlife issue.</p> <p>Hardwood Ecosystem Experiment (HEE), a 100-year research project, continued including research on Indiana bats and other RTE species.</p> <p>Surveys for various State and federal listed species are conducted by researchers working with Hardwood Ecological Experiment, surveyors working on MM-YW Backcountry Area Ecoblitz, and routine surveys conducted by Ecologists and Biologists with Indiana DNR. One Indiana bat seasonal harvest restriction zone was reduced in size at Yellowwood SF due to the acquisition of new occupancy data in 2017.</p>
<p><b>6.2.b</b> When RTE species are present or assumed to be present, modifications in management are made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats. <b>Conservation zones</b> and/or <b>protected areas</b> are established for RTE species, including those S3 species that are considered rare, where they are necessary to maintain or improve the short and long-term viability of the species. Conservation measures are based on relevant science, guidelines and/or consultation with relevant, independent experts as necessary to achieve the conservation goal of the Indicator.</p>	<p>C</p>	<p>When RTE species are known to occur (by querying the Natural Heritage Database), 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 species accounts in the State Forest Environmental Assessment, consultation with DNR biologists/ecologists, and any special guidance developed for State Forests (e.g., DoF’s management guidance for federally listed bats). NatureServe may serve as another source to search for additional management guidelines for RTE species.</p> <p>Various routine forest management activities occurred within (where allowable) or near protected areas and conservation zones. In general, when activities occur near, foresters avoid the area to be protected and establish buffers around protected areas/features for extra protection. Activities occurring within protected conservation areas were compatible with the protected resources and followed all established and applicable management guidelines.</p>
<p><b>6.2.c</b> For medium and large public forests (e.g. state forests), forest management plans and operations are designed to meet species’ recovery goals, as well as landscape level biodiversity conservation goals.</p>	<p>C</p>	<p>DoF follows its guidelines on the conservation of the federally listed bats. 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 (e.g., Bergeson et al. (2018) Managed forests provide roosting opportunities for Indiana bats in south-central Indiana. Forest Ecology and Management, 427:305-316; and</p>

		<p>Pauli, Benjamin (2014). Nocturnal and Diurnal Habitat of Indiana and Northern Long Eared Bats, and the Simulated Effect of Timber Harvest on Habitat Suitability. PhD Dissertation, Purdue University.)</p> <p>Other species recovery efforts continue such as:</p> <ul style="list-style-type: none"> <li>- Native Virginia pine at Clark SF</li> <li>- Chestnut – Cooperative project with American Chestnut Foundation and Purdue</li> <li>- Cucumber Magnolia at Jackson Washington SF</li> <li>- Short’s Goldenrod at Crawford SF (1 of 2 locations in the world)</li> <li>- Yellowwood trees at Yellowwood SF</li> </ul> <p>The 2015-2019 Strategic Plan identified the goal to: Work toward a long-term balance in forest stand ages and structure with 10% of forest acreage in or developing older forest conditions (e.g. nature preserves and high conservation forests) as well as 10% in early successional, young forests (0-20 years old). Many areas within the state forests have been designated for the development of older forest conditions, such as nature preserves and research sites. A similar level of commitment to the equally important establishment of early successional habitat is not currently available on state forest properties. A state forest early-successional habitat management program will be developed to strategically identify areas where the management priority is to both regenerate oak-hickory dominated stands and provide a consistent availability of young forest habitat.</p> <p>Three Back Country areas, totaling over 6,000 acres across the State, are managed to develop late seral conditions.</p>
<p><b>6.2.d</b> Within the capacity of the forest owner or manager, hunting, fishing, trapping, collecting and other activities are controlled to avoid the risk of impacts to vulnerable species and communities (See Criterion 1.5).</p>	<p>C</p>	<p>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 forest offices regarding ginseng harvesting. SCS also noted that district offices were working with horse rider groups on maintaining established trails.</p> <p>When planning new trails to be developed they are routed to exclude areas of concern.</p> <p>All wildlife research collection must be permitted by DNR-Fish &amp; Wildlife and/or US Fish &amp; Wildlife Service. Collection activities occurring on dedicated nature preserves located in State Forests are also authorized by the Division of Nature Preserves.</p>

<p><b>6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.</b></p>	<p>C</p>	
<p><b>6.3.a. Landscape-scale indicators</b></p>	<p>C</p>	
<p><b>6.3.a.1</b> The forest owner or manager maintains, enhances, and/or restores under-represented <b>successional</b> stages in the FMU that would naturally occur on the types of sites found on the FMU. Where old growth of different community types that would naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance and/or restore old growth characteristics.</p>	<p>C</p>	<p>DoF has a goal to work towards 10% of the forest in the underrepresented early successional stage. Nature Preserves are being established and protected on DoF property and across the State. DoF strategic plan is to work towards developing 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). Three units at about 200 acres each.</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> </ul> <p>In 2018, DoF reported 120 acres of openings for early successional habitat (2017/2018). Also 172 acres of mine reclamation that will become early successional habitat.</p>
<p><b>6.3.a.2</b> When a <b>rare ecological community</b> is present, modifications are made in both the management plan and its implementation in order to maintain, restore or enhance the viability of the community. Based on the vulnerability of the existing community, <b>conservation zones</b> and/or <b>protected areas</b> are established where warranted.</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. 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><b>6.3.a.3</b> When they are present, management maintains the area, structure, composition, and processes of all <b>Type 1</b> and <b>Type 2 old growth</b>. Type 1 and 2 old growth are also protected and buffered as necessary with conservation zones, unless an alternative plan is developed that provides greater overall protection of old growth values.</p> <p>Type 1 Old Growth is protected from harvesting and road construction. Type 1 old growth is also protected from other timber management activities, except as needed to maintain the</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 used 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 1 or 2. DoF has other areas on the forests that are being managed for late serial conditions, but do not yet meet the definition of Type 2.</p>

<p>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>DoF has no identified old growth, however DNR does annual checks for old growth based on Forest Inventory and Analysis (FIA), Continuous Forest Inventory (CFI) data, and historical tract records.</p>
<p><b>6.3.b</b> To the extent feasible within the size of the ownership, particularly on larger ownerships (generally tens of thousands or more acres), management maintains, enhances, or restores habitat conditions suitable for well-distributed populations of animal species that are characteristic of forest ecosystems within the landscape.</p>	<p>C</p>	<p><i>IDNR Division of Forestry Strategic Direction 2015-2019</i> includes the following goals:</p> <ul style="list-style-type: none"> <li>- Work toward a long-term balance in forest stand ages and structure with 10% of forest acreage in or developing older forest conditions (e.g. nature preserves and high conservation forests) as well as 10% in early successional, young forests (0-20 years old).</li> <li>- Conserve and manage wildlife habitats, cultural resources and high conservation value forests.</li> </ul>



		<p>In 2017, the following projects were reported in alignment with the strategic goals above:</p> <ol style="list-style-type: none"> <li>1) Openings, creating early successional habitat</li> <li>2) Snag retention &amp; cavity tree retention</li> <li>3) Invasive species control</li> <li>4) Prescribed burning</li> </ol>
<p><b>6.3.c</b> Management maintains, enhances and/or restores the plant and wildlife habitat of <b>Riparian Management Zones (RMZs)</b> to provide:</p> <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 that breed in adjacent <b>aquatic habitats</b>;</li> <li>c) habitat for species that use riparian areas for feeding, cover, and travel;</li> <li>d) habitat for plant species associated with riparian areas; and,</li> <li>e) stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem.</li> </ol>	C	<p>Indiana Logging and Forestry Best Management Practices: BMP Field Guide (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 (d and e).</p> <p>Management activities done near riparian areas include timber harvest with stream crossing and tree planting. All activities done in consideration of the BMP and Indiana bat guidelines. See site notes.</p>
<p><b>Stand-scale Indicators</b></p> <p><b>6.3.d</b> Management practices maintain or enhance plant species composition, distribution and frequency of occurrence similar to those that would naturally occur on the site.</p>	C	<p>Indiana DoF has an increased emphasis on management and sustainability of oak-hickory communities due to their decline on the landscape (Indiana State Forests Environmental Assessment 2008-2027). 2017: Openings and small clearcuts (&gt;10 acres) DoF was in conformance retention indicators.</p>
<p><b>6.3.e</b> When planting is required, a local source of known provenance is used when available and when the local source is equivalent in terms of quality, price and productivity. The use of non-local sources shall be 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>Midwest with Indiana sources are used when planting occurs. However, the primary means of regeneration are natural (seed or resprouting) and planting is limited.</p>
<p><b>6.3.f</b> Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include:</p> <ol style="list-style-type: none"> <li>a) large live trees, live trees with decay or declining health, <b>snags</b>, and well-distributed coarse down and dead woody material. <b>Legacy trees</b> where present are not harvested; and</li> <li>b) vertical and horizontal complexity.</li> </ol>	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. Guidelines are being followed as confirmed during the 2018 audit by observation of field sites and staff interviewed demonstrated knowledge of relevant requirements.</p>

<p>Trees selected for <b>retention</b> are generally representative of the dominant species found on the site.</p>		
<p><b>6.3.g.1</b> In the Southeast, Appalachia, Ozark-Ouachita, Mississippi Alluvial Valley, and Pacific Coast Regions, when <b>even-aged systems</b> are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit as described in Appendix C for the applicable region.</p> <p>In the Lake States Northeast, Rocky Mountain and Southwest Regions, when even-aged silvicultural systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime unless retention at a lower level is necessary for the purposes of restoration or rehabilitation. See Appendix C for additional regional requirements and guidance.</p>	<p>C</p>	<p>DOF occurs in the Lakes States region.</p> <p>DoF primarily employs uneven-aged management practices, such as individual tree selection and group selection. Even-aged management practices include clearcuts and shelterwood systems.</p> <p>DoF has practiced even-aged management on an experimental basis as documented in the HEE report. It is important to note that DoF’s experimental forests include both even-age and uneven-age silvicultural systems as part of the HEE (<a href="https://heeforeststudy.org">https://heeforeststudy.org</a>).</p> <p>The IDNR Division of Forestry Strategic Direction 2015-2019 includes a goal to: Continue to use the uneven-aged system as the primary silvicultural system on the state forests while increasing the use of shelterwood and other even-aged regeneration practices and management prescriptions.</p>
<p><b>6.3.g.2</b> Under very limited situations, the landowner or manager has the option to develop a qualified plan to allow minor departure from the opening size limits described in Indicator 6.3.g.1. A qualified plan:</p> <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 or otherwise imposed by state/ local law or regulation.</p>
<p><b>6.3.h</b> The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops</p>	<p>C</p>	<p>During the development of the management guide for a tract the Ecological Resource Review form is filled out</p>

<p>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>which includes Section #5, Non-native Invasive Species, where such species are listed including management actions. These species, along with management and monitoring actions, are most often also included in the management guide.</p> <p>In addition to the regular efforts, IN State Forests hire interns to conduct invasive species control projects. The Division received a federal Joint Chiefs grant along with NRCS and, for some State Forests, receive additional federal funds for native species restoration (such as oak forest restoration with National Forest). DoF uses a portion for invasive species control to enhance oak regeneration. In 2018, auditors visited an area where the forester had sprayed stilt grass and was experimenting to find the most effective way to eradicate it.</p> <p>DoF participates in the Southern IN Cooperative Weed Management Area.</p> <p>Treatment of invasives include not only stilt grass, but also multiflora rose, bush honeysuckle, Japanese honeysuckle, kudzu, wisteria and stilt grass. For prevention, DoF has set up education for users at trailheads, campgrounds and offices. In addition, when issues are identified and a particular site is considered vulnerable, the DNR may require equipment cleaning.</p>
<p><b>6.3.i</b> In applicable situations, the forest owner or manager identifies and applies site-specific fuels management practices, based on: (1) natural fire regimes, (2) risk of wildfire, (3) potential economic losses, (4) public safety, and (5) applicable laws and regulations.</p>	<p>C</p>	<p>When applicable, 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>In 2017, a site visit with HEE science staff (no DNR staff included) occurred at an experimental prescribed burn site of the HEE management experiments in openings and closed forests as part of wildlife and plant population dynamics research.</p>
<p><b>6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.</b></p>	<p>C</p>	
<p><b>6.4.a</b> The forest owner or manager documents the ecosystems that would naturally exist on the FMU, and assesses the adequacy of their representation and protection in the <b>landscape</b> (see Criterion 7.1). The assessment for medium and large forests include some or all of the following: a) <b>GAP analyses</b>; b) collaboration with</p>	<p>C</p>	<p>In 2008, DoF worked with Division of Nature Preserves (DNP) to complete a community gap analysis in natural region sections that contain state forests. This analysis included all state forests and considered the natural communities that were expected to be found in each natural region section and whether protected samples existed and to what extent.</p>

<p>state natural heritage programs and other public agencies; c) regional, landscape, and watershed planning efforts; d) collaboration with universities and/or local conservation groups.</p> <p>For an area that is not located on the FMU to qualify as a Representative Sample Area (RSA), it should be under permanent protection in its natural state.</p>		<p>All state forests were considered during this process. In 2009, DoF identified a continuous, on-going process to identify natural communities on state forests to serve as future candidate RSAs, where needed.</p>
<p><b>6.4.b</b> Where existing areas within the landscape, but external to the FMU, are not of adequate protection, size, and configuration to serve as representative samples of existing ecosystems, forest owners or managers, whose properties are conducive to the establishment of such areas, designate ecologically viable RSAs to serve these purposes.</p> <p>Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.</p>	<p>C</p>	<p>See 6.4.a. While not specifically designated as RSAs, DoF has identified ecosystems that would naturally exist on the FMU and are underrepresented. They have employed efforts to enhance the development of these ecosystems. 1) DoF has identified that early successional forests are underrepresented and has developed a goal of having 10% of forest acreage in early successional, young forests. 2) Additionally, as noted by researchers from the HEE, oak-hickory stands that previously dominated Indiana’s forest are not replacing themselves. A priority has been placed on successfully regenerating oak-hickory forests where appropriate.</p>
<p><b>6.4.c</b> Management activities within RSAs are limited to low impact activities compatible with the protected RSA objectives, except under the following circumstances: a) harvesting activities only where they are necessary to restore or create conditions to meet the objectives of the protected RSA, or to mitigate conditions that interfere with achieving the RSA objectives; or b) road-building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the RSA was designated.</p>	<p>C</p>	<p>DoF has a policy to limit management activities in RSAs to those that will improve the desired ecological condition of the stand.</p>
<p><b>6.4.d</b> The RSA assessment (Indicator 6.4.a) shall be periodically reviewed and if necessary updated (at a minimum every 10 years) in order to determine if the need for RSAs has changed; the designation of RSAs (Indicator 6.4.b) is revised accordingly.</p>	<p>C</p>	<p>The last reassessment was done in 2012 and is due to be done again by 2022.</p>
<p><b>6.4.e</b> Managers of large, contiguous public forests establish and maintain a network of representative protected areas sufficient in size to maintain species dependent on interior core habitats.</p>	<p>C</p>	<p>See 6.4.a Three Back Country areas, totaling over 6,000 acres across the State, are managed to develop late seral conditions. Most of the State Forest properties each have a large contiguous feature. Management is conducive to maintaining this attribute.</p>

<p><b>6.5 Written guidelines shall be prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.</b></p>	<p>C</p>	
<p><b>6.5.a</b> The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.</p>	<p>C</p>	<p>The State of Indiana BMP manual and timber harvest contracts contain information that details the specification for conformance to this criterion. Written guidelines are also included in the State Forest Procedures Manual (<a href="http://www.in.gov/dnr/forestry/5197.htm">http://www.in.gov/dnr/forestry/5197.htm</a>).</p>
<p><b>6.5.b</b> Forest operations meet or exceed Best Management Practices (BMPs) that address components of the Criterion where the operation takes place.</p>	<p>C</p>	<p>DoF's implementation of BMPs meets or exceeds the components of this criterion on timber harvest operations. Field sites inspected during the 2018 audit were in conformance with BMP requirements. Forestry field staff interviewed confirmed knowledge of implementation of BMP requirements for timber sales and other management activities. Without exception field staff either had copies of the BMP field guide books in vehicles, had it at their desk, or were able to access online by smart phone upon request during the audit.</p>
<p><b>6.5.c</b> Management activities including site preparation, harvest prescriptions, techniques, timing, and equipment are selected and used to protect soil and water resources and to avoid erosion, landslides, and significant soil disturbance. Logging and other activities that significantly increase the risk of landslides are excluded in areas where risk of landslides is high. The following actions are addressed:</p> <ul style="list-style-type: none"> <li>• Slash is concentrated only as much as necessary to achieve the goals of site preparation and the reduction of fuels to moderate or low levels of fire hazard.</li> <li>• Disturbance of topsoil is limited to the minimum necessary to achieve successful regeneration of species native to the site.</li> <li>• Rutting and compaction is minimized.</li> <li>• Soil erosion is not accelerated.</li> <li>• Burning is only done when consistent with natural disturbance regimes.</li> <li>• Natural ground cover disturbance is minimized to the extent necessary to achieve regeneration objectives.</li> <li>• Whole tree harvesting on any site over multiple rotations is only done when research indicates soil productivity will not be harmed.</li> </ul>	<p>C</p>	<p>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.”</p> <p>The DoF rutting guidelines are 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.</p> <p>Slash management on Indiana state forest properties primarily focuses on keeping streams and waterways clear of slash debris. The state forest lands are very productive, on average, are primarily managed by selection harvests and thinnings, with little- to no- whole tree harvest conducted so risks of nutrient loss from slash removal are minimal. Forestry staff demonstrated awareness of regeneration and monitoring is sufficient to capture when and where regeneration failures occur which may be rectified via artificial plantings of native species. In areas where there is steep terrain, several sites were visited that</p>

<ul style="list-style-type: none"> <li>• Low impact equipment and technologies is used where appropriate.</li> </ul>		<p>include appropriate water bars or other features designed to limit top soil movement and/or loss.</p> <p>Other than training and performance requirements, DNR has limited control of selecting harvesters as a public bid process is used. However, equipment restrictions are allowed and employed at the forester’s professional judgement.</p>
<p><b>6.5.d</b> The transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, maintained, and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects, while allowing for customary uses and use rights. This includes:</p> <ul style="list-style-type: none"> <li>• access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts;</li> <li>• road density is minimized;</li> <li>• erosion is minimized;</li> <li>• sediment discharge to streams is minimized;</li> <li>• there is free upstream and downstream passage for aquatic organisms;</li> <li>• impacts of transportation systems on wildlife habitat and migration corridors are minimized;</li> <li>• area converted to roads, landings and skid trails is minimized;</li> <li>• habitat fragmentation is minimized;</li> <li>• unneeded roads are closed and rehabilitated.</li> </ul>	<p>C</p>	<p>Sites visited in 2018 demonstrated good to excellent main haul roads. Auditors observed some rutting and erosion on recreational trails, especially those open for equestrian use, see Site Notes. However, in those cases foresters either had taken appropriate steps to rectify or were in process of doing so. Most repairs are done by horse-riding clubs who both benefit from safe, maintained trails, and run the risk of injury to self or horse from poorly constructed or poorly maintained trails.</p>
<p><b>6.5.e.1</b> In consultation with appropriate expertise, the forest owner or manager implements written <b>Streamside Management Zone (SMZ) buffer</b> management guidelines that are adequate for preventing environmental impact, and include protecting and restoring water quality, hydrologic conditions in rivers and stream corridors, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas. The guidelines include vegetative buffer widths and protection measures that are acceptable within those buffers.</p>	<p>C</p>	<p>As the Lake States/ Central Hardwood region has no recognized FSC regional SMZ buffer requirements, DoF defaults to SMZ buffer width established in the Indiana BMP manual and, where applicable, any forest-specific restrictions established through county or township ordinances. All harvests observed in the 2016 evaluation met these SMZ requirements.</p>

<p>In the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.</p>		
<p><b>6.5.e.2</b> Minor variations from the stated minimum SMZ widths and layout for specific stream segments, wetlands and other water bodies are permitted in limited circumstances, provided the forest owner or manager demonstrates that the alternative configuration maintains the overall extent of the buffers and provides equivalent or greater environmental protection than FSC-US regional requirements for those stream segments, water quality, and aquatic species, based on site-specific conditions and the best available information. The forest owner or manager develops a written set of supporting information including a description of the riparian habitats and species addressed in the alternative configuration. The CB must verify that the variations meet these requirements, based on the input of an independent expert in aquatic ecology or closely related field.</p>	<p>C</p>	<p>The audit team uncovered no variations from minimum SMZ widths established in the recommended BMPs. The FME has not needed nor pursued any exceptions for variation in the past and expresses no plans to do so in the future.</p>
<p><b>6.5.f</b> Stream and wetland crossings are avoided when possible. Unavoidable crossings are located and constructed to minimize impacts on water quality, hydrology, and fragmentation of <b>aquatic habitat</b>. Crossings do not impede the movement of aquatic species. Temporary crossings are restored to original hydrological conditions when operations are finished.</p>	<p>C</p>	<p>Stream crossings on DoF meet BMPs. BMPs include avoiding crossings when possible and to install appropriate BMPs based on stream channel size and frequency of peak flow events. Crossings observed on DoF allowed the free movement of aquatic species. Temporary crossings are restored and debris removed to allow flow.</p>
<p><b>6.5.g</b> Recreation use on the FMU is managed to avoid negative impacts to soils, water, plants, wildlife and wildlife habitats.</p>	<p>C</p>	<p>DoF allows many types of recreation, including hiking, camping, hunting, mountain biking, and horseback riding. DoF has postings near state forest offices on what types of activities require permits and which do not. 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><b>6.5.h</b> Grazing by domesticated animals is controlled to protect in-stream habitats and water quality, the species composition and viability of the riparian vegetation, and the banks of the stream channel from erosion.</p>	<p>C</p>	<p>There is no grazing by domesticated animals on DoF forestland. No evidence of grazing was discovered during the 2018 audit.</p>
<p><b>6.6. Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.</b></p>	<p>C</p>	
<p><b>6.6.a</b> No products on the FSC list of Highly Hazardous Pesticides are used (see FSC-POL-30-001 EN FSC Pesticides policy 2005 and associated documents).</p>	<p>C</p>	<p>DNR does not use chemicals listed as highly hazardous on lands under this certificate. The SCS audit team received a complete list of chemicals in use on DoF and none are on the FSC-prohibited list. Interviews with responsible forestry staff demonstrated knowledge of this requirement. No use was discovered during site inspections or in reviews of documentation.</p>
<p><b>6.6.b</b> All toxicants used to control pests and competing vegetation, including rodenticides, insecticides, herbicides, and fungicides are used only when and where non-chemical management practices are: a) not available; b) prohibitively expensive, taking into account overall environmental and social costs, risks and benefits; c) the only effective means for controlling invasive and exotic species; or d) result in less environmental damage than non-chemical alternatives (e.g., top soil disturbance, loss of soil litter and down wood debris). If chemicals are used, the forest owner or manager uses the least environmentally damaging formulation and application method practical.</p> <p>Written strategies are developed and implemented that justify the use of chemical pesticides. Whenever feasible, an eventual phase-out of chemical use is included in the strategy. The written strategy shall include an analysis of options for, and the effects of, various</p>	<p>C</p>	<p>Chemical use by DoF is primarily aimed at treating invasive exotic species. For example, its use was documented for treatment of Ailanthus and Japanese knotweed, among others. In some cases, chemicals may be used as a forest stand treatment such as stem-girdle and cut stump treatments. Evidence of using the least environmentally damaging formulation and targeted spray was confirmed on at least one site during field inspections, see Site Notes.</p>



<p>chemical and non-chemical pest control strategies, with the goal of reducing or eliminating chemical use.</p>		
<p><b>6.6.c</b> Chemicals and application methods are selected to minimize risk to non-target species and sites. When considering the choice between aerial and ground application, the forest owner or manager evaluates the comparative risk to non-target species and sites, the comparative risk of worker exposure, and the overall amount and type of chemicals required.</p>	<p>C</p>	<p>No aerial application occurs on DoF. All application is by hand spray. State workers who apply chemicals are licensed applicators and are instructed to follow the label guidelines for each chemical. MSDS are also available for each chemical, which address the potential risks. Workers must record the amount and type of all chemicals. The amount of chemicals applied on each state forest is reported and summarized at the central office on an annual basis.</p>
<p><b>6.6.d</b> Whenever chemicals are used, a written prescription is prepared that describes the site-specific hazards and environmental risks, and the precautions that workers will employ to avoid or minimize those hazards and risks, and includes a map of the treatment area. Chemicals are applied only by workers who have received proper training in application methods and safety. They are made aware of the risks, wear proper safety equipment, and are trained to minimize environmental impacts on non-target species and sites.</p>	<p>C</p>	<p>DoF pesticide use record sheet includes notes on effectiveness of treatment. These records are sent annually to the Forest Properties Specialist for review and chemical use reporting to certifying bodies. Verified for observed State Forest in 2018 State workers who apply chemicals are licensed applicators and are instructed to follow the label guidelines for each chemical. MSDS are also available for each chemical, which address the potential risks.</p>
<p><b>6.6.e</b> If chemicals are used, the effects are monitored and the results are used for adaptive management. Records are kept of pest occurrences, control measures, and incidences of worker exposure to chemicals.</p>	<p>C</p>	<p>DoF documents applications in a chemical use log. Chemicals are only used for invasive plants and competing vegetation. Observed records being kept for treatment of Japanese knotweed, Ailanthus, and stilt grass.</p>
<p><b>6.7. Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.</b></p>	<p>C</p>	
<p><b>6.7.a</b> The forest owner or manager, and employees and contractors, have the equipment and training necessary to respond to hazardous spills</p>		<p>Refer to State of Indiana Laws at the Department of Environmental Management. Contracts contain reference to compliance with state and federal laws, which implies spill procedures. Contractors interviewed understood spill response procedures and were able to demonstrate spill kits on site.</p>
<p><b>6.7.b</b> In the event of a hazardous material spill, the forest owner or manager immediately contains the material and engages qualified personnel to perform the appropriate removal and remediation, as required by applicable law and regulations.</p>		<p>See 6.7.a.</p>

<p>6.7.c. Hazardous materials and fuels are stored in leak-proof containers in designated storage areas, that are outside of riparian management zones and away from other ecological sensitive features, until they are used or transported to an approved off-site location for disposal. There is no evidence of persistent fluid leaks from equipment or of recent groundwater or surface water contamination.</p>	<p>C</p>	<p>DoF procedures are to store any hazardous materials and fuels appropriate. During prescribed burning qualified and trained fire officers ensure all procedures are followed. Generally, the DoF does not use chemical herbicides as standard site preparation because they rely on natural regeneration of hardwood species which are vulnerable to most commercial brands of forestry herbicides.</p>
<p><b>6.8. Use of biological control agents shall be documented, minimized, monitored, and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.</b></p>	<p>C</p>	
<p><b>6.8.a</b> Use of <i>biological control agents</i> are used only as part of a pest management strategy for the control of invasive plants, <i>pathogens</i>, insects, or other animals when other pest control methods are ineffective, or are expected to be ineffective. Such use is contingent upon peer-reviewed scientific evidence that the agents in question are non-invasive and are safe for native species.</p>	<p>C</p>	<p>Biological control agents are no longer used on the forest. There has been no recent introduction of biological control on State Forest properties, as confirmed in interviews and review of the FMP.</p>
<p><b>6.8.b</b> If biological control agents are used, they are applied by trained workers using proper equipment.</p>	<p>C</p>	<p>See 6.8.a.</p>
<p><b>6.8.c</b> If biological control agents are used, their use shall be documented, monitored and strictly controlled in accordance with state and national laws and internationally accepted scientific protocols. A written plan will be developed and implemented justifying such use, describing the risks, specifying the precautions workers will employ to avoid or minimize such risks, and describing how potential impacts will be monitored.</p>	<p>C</p>	<p>See 6.8.a.</p>
<p><b>6.8.d</b> Genetically Modified Organisms (GMOs) are not used for any purpose</p>	<p>C</p>	<p>There is no use of GMOs on the FMU, as confirmed in interviews and review of the FMP.</p>
<p><b>6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.</b></p>	<p>C</p>	
<p><b>6.9.a</b> The use of <i>exotic species</i> is contingent on the availability of credible scientific data indicating that any such species is non-invasive and its application does not pose a risk to native biodiversity.</p>	<p>C</p>	<p>DOF has use of seed mixes detailed in its procedure manual and application in the BMP manual. DOF generally uses winter wheat or oats depending on the season (coldness) for closeouts. However, with the increased incidence of Japanese Stilt grass (exotic) on some State Forests, DOF has</p>

		<p>started using fescues (exotic), especially the shorter varieties as they are more competitive with the Stilt grass. There has been some research to show that Kentucky 31 fescue can crowd out stilt grass. Winter wheat and oats application works well the first growing season, however as the seed does not cover the ground completely, they just tend to make a very good cover for stilt grass to seed in. The Division of Nature Preserve ecologists, would rather have the tradeoff for fescue persistence than the spread of more stilt grass.2017: Log yard seeding periodically monitored for effectiveness. No control measures were required.</p>
<p><b>6.9.b</b> If exotic species are used, their provenance and the location of their use are documented, and their ecological effects are actively monitored.</p>	<p>C</p>	<p>State Forest Procedure Manual Section W: Pest and Invasive Species Management with Appendix of recommended seeding mixtures (State Forest Procedure Manual Section W.doc).</p>
<p><b>6.9.c</b> The forest owner or manager shall take timely action to curtail or significantly reduce any adverse impacts resulting from their use of exotic species</p>	<p>C</p>	<p>Species used to re-seed landings and other exposed areas tend to remain at the planted location. Like many state agencies, DOF discontinued the use of some seed mixes once they were proven to be invasive.</p> <p>Treatment of multiflora rose, bush honeysuckle, Japanese honeysuckle, kudzu, wisteria and stilt grass. For prevention, DoF has been doing education for users at trailheads, campgrounds and offices. Monitoring during post-harvest inspections.</p>
<p><b>6.10. Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion:</b>  <b>a) Entails a very limited portion of the forest management unit; and b) Does not occur on High Conservation Value Forest areas; and c) Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.</b></p>	<p>NA</p>	
<p><b>6.10.a</b> Forest <i>conversion</i> to non-forest land uses does not occur, except in circumstances where conversion entails a very limited portion of the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).</p>	<p>NA</p>	<p>No forest conversion has occurred in the past year, as confirmed in interviews and review of the FMP.</p>
<p><b>6.10.b</b> Forest <i>conversion</i> to non-forest land uses does not occur on high conservation value forest areas (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).</p>	<p>NA</p>	<p>No forest conversions occur.</p>

<p><b>6.10.c</b> Forest <i>conversion</i> to non-forest land uses does not occur, except in circumstances where conversion will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).</p>	<p>NA</p>	<p>No forest conversions occur.</p>
<p><b>6.10.d</b> Natural or semi-natural stands are not converted to plantations. Degraded, semi-natural stands may be converted to restoration plantations.</p>	<p>NA</p>	<p>No natural forest areas have been converted to plantations. DoF's management can be characterized as natural forest management.</p>
<p><b>6.10.e</b> Justification for land-use and stand-type conversions is fully described in the long-term management plan, and meets the biodiversity conservation requirements of Criterion 6.3 (see also Criterion 7.1.l)</p>	<p>NA</p>	<p>This should be monitored over future evaluations as there are areas where 3<sup>rd</sup> parties own the Oil, Gas and Mineral (OGM) rights, as well as places where the state may own the rights.</p>
<p><b>6.10.f</b> Areas converted to <i>non-forest use</i> for facilities associated with subsurface mineral and gas rights transferred by prior owners, or other conversion outside the control of the certificate holder, are identified on maps. The forest owner or manager consults with the CB to determine if removal of these areas from the scope of the certificate is warranted. To the extent allowed by these transferred rights, the forest owner or manager exercises control over the location of surface disturbances in a manner that minimizes adverse environmental and social impacts. If the certificate holder at one point held these rights, and then sold them, then subsequent conversion of forest to non-forest use would be subject to Indicator 6.10.a-d.</p>	<p>NA</p>	<p>In regard to subsurface property rights, the majority of coal rights are owned by others at Greene-Sullivan. There are outstanding subsurface rights on some State Forests tracts. DoF tries to get surface rights as much as possible. Areas where mining is an issue on the State Forests is very limited. Rights-of-way for federal and state highways and RxR tracks are largely out of the control of DoF. DoF should keep SCS informed of any conversion activities.</p>
<p><b>Principle #7: A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.</b></p>		
<p>NE</p>		
<p><b>Principle #8: Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.</b></p>		
<p><b>8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations, as well as, the relative complexity and fragility of the</b></p>	<p>NE</p>	

<p><b>affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.</b></p>		
<p><b>8.1.a</b> Consistent with the scale and intensity of management, the forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written monitoring protocol.</p>		
<p><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></p>	C	
<p><b>8.2.a.1</b> For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.</p>	C	<p>DoF meets the breadth of this Indicator through its periodic system-wide inventory and CFI system, which together cover items a)-f).</p> <p>The process to evaluate regeneration in regeneration openings (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. Actual harvest 2017/2018: 7,330 MBF which includes 4,590 MBF of saw logs plus 5,480 cords converted to BF. CFI and FIA continued on the state forests this year.</p>
<p><b>8.2.a.2</b> Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information shall include date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative.</p>	C	<p>During active operations, monitoring generally includes at least weekly site inspections with the results documented on the Timber Sale Visitation and Evaluations. Site inspections are recorded in the form, Each sale receives a post-harvest BMP review. Documentation was reviewed for a selection of sites visited during the audit.</p>
<p><b>8.2.b</b> The forest owner or manager maintains records of harvested timber and NTFPs (volume and product and/or grade). Records must adequately ensure that the requirements under Criterion 5.6 are met.</p>	C	<p>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.</p>

<p><b>8.2.c</b> The forest owner or manager periodically obtains data needed to monitor presence on the FMU of:</p> <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> </ol> <p>High Conservation Value Forests (see Criterion 9.4).</p>	<p>C</p>	<p>The Indiana DoF properties section Forestry Wildlife Specialist completes annual monitoring of snag and cavity trees, bat populations and spring resident bird populations. Monitoring of summer breeding bird populations, forest amphibians, and deer impacts from browsing were suspended in 2012/2013 due to time constraints from developing the bat HCP and EA. Bat surveys have been of highest priority to support development of bat Habitat Conservation Plan which is anticipated to be submitted to the USFWS as a final draft in 2019, at the earliest.</p> <p>Division of Fish &amp; 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 or biennial surveys on preserves. DoF completes monitoring of BMP's annually.</p> <ul style="list-style-type: none"> <li>• RTE species that were previously undetected in other surveys are reported to the Natural Heritage Inventory Database.</li> <li>• 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). The Division of Nature Preserves monitors each HCV either annually or biennially.</li> <li>• Hardwood Ecosystem Experiment (HEE), a 100-year research project (<a href="https://heeforeststudy.org">https://heeforeststudy.org</a>), continued research, monitoring, and surveys on numerous State Forest taxa, including research on Indiana bats. There was a change in an existing management buffer due to the finding of an Indiana bat maternity roost tree. Limited EcoBlitz surveys occurred in the backcountry area of the Morgan-Monroe and Yellowwood State Forests in 2018.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<p><b>8.2.d.1</b> Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective.</p>	<p>C</p>	<p>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>

		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. BMP audit reports from 2006-2015 are located here, <a href="http://www.in.gov/dnr/forestry/7532.htm">http://www.in.gov/dnr/forestry/7532.htm</a>
<b>8.2.d.2</b> A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.	C	DoF monitors road construction and maintenance by tracking how many miles are completed each year per property. Informal inspections occur during and after timber harvests.
<b>8.2.d.3</b> 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	Summary and Monitoring of Social Impacts of State Forest Management Activities  State Forest Environmental Assessment: ( <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> ).  State Forest open houses and online comment periods for management guides, BMP monitoring on all state forest timber sales.
<b>8.2.d.4</b> Stakeholder responses to management activities are monitored and recorded as necessary.	C	Strategic Plan and EA has stakeholder comments and responses recorded. Stakeholder comments and responses to Management Guides are summarized on DoF website. All stakeholder comments regarding the 2015-19 Forestry Strategic Directions were summarized and responses prepared as part of the planning process.
<b>8.2.d.5</b> Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3).	C	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.
<b>8.2.e</b> The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.	C	Costs of arranging each timber sale is included in 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 to assess productivity and efficiency.
<b>8.3</b> Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."	NE	
<b>8.4</b> The results of monitoring shall be incorporated into the implementation and revision of the management plan.	NE	
<b>8.5</b> While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.	NE	

<p><b>8.5.a</b> While protecting landowner confidentiality, either full monitoring results or an up-to-date summary of the most recent monitoring information is maintained, covering the Indicators listed in Criterion 8.2, and is available to the public, free or at a nominal price, upon request.</p>		
<p><b>Principle #9: Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.</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><b>a) Forest areas containing globally, regionally or nationally significant: concentrations of biodiversity values (e.g., endemism, endangered species, refugia); and/or large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance</b></li> <li><b>b) Forest areas that are in or contain rare, threatened or endangered ecosystems</b></li> <li><b>c) Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control)</b></li> <li><b>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).</b></li> </ul>		
<p><b>9.1</b> Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.</p>	NE	
<p><b>9.2</b> The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.</p>	NE	
<p><b>9.3</b> The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.</p>	NE	
<p><b>9.4</b> Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.</p>	C	
<p><b>9.4.a</b> The forest owner or manager monitors, or participates in a program to annually monitor, the status of the specific HCV attributes, including the effectiveness of the measures employed for their maintenance or enhancement. The monitoring program is designed and</p>	C	<p>Division of Nature Preserves conducts monitoring program for HCVF. DoF’s updated HCVF documents address Indicator 9.4.a. Monitoring is the responsibility of Nature Preserves.</p> <p>The Division of Nature Preserves monitors each HCV either annually or biennially. The monitoring includes threats to</p>



<p>implemented consistent with the requirements of Principle 8.</p>		<p>the preserve including invasive species, primary natural communities, and assessment of the health of the community. The ecologist shares information with the property owner (DoF in the case of the HCVs) and discusses any problems and potential solutions.</p>
<p><b>9.4.b</b> When monitoring results indicate increasing risk to a specific HCV attribute, the forest owner/manager re-evaluates the measures taken to maintain or enhance that attribute, and adjusts the management measures in an effort to reverse the trend.</p>	<p>C</p>	<p>DoF has been working on an Indiana Bat HCP and provided an update of status at the 2018 audit. In the meantime, DoF applies its interim guidelines for federally listed bats, including the Indiana bat. DoF wildlife specialist indicates that other bat species may be at risk due to White-nose syndrome and awaits further information from cooperating organizations and federal approval of its submitted HCP and Environmental Assessment.</p> <p>The Division of Nature Preserves implements the HCV monitoring program. Most HCV are either annually or biennially monitored, and DoNP meets with DoF regarding the results.</p>
<p><b>Principle #10: Plantations shall be planned and managed in accordance with Principles and Criteria 1-9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.</b></p> <p>Principle 10 is determined by the audit team to be not applicable to the evaluation of the FME as the type of silviculture practiced on the state forestlands, and the forest conditions that result from these practices, do not meet the FSC definition of “plantation forest management.”</p>		

### Appendix 6 – Chain of Custody Indicators for FMEs Conformance Table

Chain of Custody indicators were not evaluated during this evaluation.

### Appendix 7 – Trademark Standard Conformance Table

Trademark Standard was not evaluated during this evaluation.