

# Indiana DNR Division of Forestry

402 W. Washington Street, Rm 296 W  
Indianapolis, IN 46204

SFI 2015-2019 Standards and Rules®, Section 2 - Forest Management

Surveillance Audit



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# NSF Forestry Program Audit Report

## A. Certificate Holder

Indiana DNR Division of Forestry

### NSF Customer Number

NSF-SFI-FM-6L841

### Contact Information (Name, Title, Phone & Email)

Brenda Huter, Forest Stewardship Coordinator  
Indiana DNR, Division of Forestry – Central Office  
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## B. Scope of Certification

Land management operations on approximately 158,264 acres of Indiana State Forests and related sustainable forestry activities including SFI Objectives 1-15. The SFI Forest Management number is NSF-SFI-FM-6L841.

### Locations Included in the Certification

The scope of the audit included the entire state forest system, but this review included field sites at two State Forests: Clark and Harrison-Crawford.

## C. Audit Team

Ruthann Schulte – SFI Lead Auditor  
Beth Jacquemain – FSC Lead Auditor

### Audit Date(s) (If multiple locations were audited, indicate the date of each site visit)

22-24 October 2018

## D. Significant Changes to Operations or to the Standard(s)

None

## E. Audit Results

- No nonconformities or opportunities for improvement were identified.
- There was/were \_\_\_\_ opportunity(ies) for improvement identified. Summary:

\_\_\_\_\_  
 There was/were \_\_\_\_ minor nonconformity(ies) identified. Summary:

\_\_\_\_\_  
 There was/were \_\_\_\_ major nonconformity(ies) identified. Summary:

Issues identified at previous audits reviewed for continued conformance. Summary:

None

- Yes
- No
- N/A (not using)

All logos and/or labels, including ANSI, ANAB, SFI, PEFC, ATFS, etc., are utilized correctly in accordance with NSF SOP 14680 and SOP 4876. If answering “No”, a finding of nonconformity should be issued.

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For Reassessment Audits:

Explain how the organization maintained and demonstrated the effectiveness and improvement of its system, including interactions between processes and locations, taking into consideration internal and external changes in order to enhance overall performance of policy and objectives.

Review the performance of the system over the period of certification (e.g., management review records, internal audit records, etc.), and the previous surveillance audit reports. Identify the records that were reviewed.

Answer: N/A

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**F. Appendices**

[Appendix 1:](#) Audit Notification Letter and Audit Agenda

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[Appendix 2:](#) SFI Forest Management Public Summary Report

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[Appendix 3:](#) Audit Standard Checklist - SFI Forest Management Standard

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[Appendix 4:](#) Field Site Visit Notes

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[Appendix 5:](#) Meeting Attendance Forms

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## Appendix 1

# Audit Notification Letter

October 8, 2018

Brenda Huter, Forest Stewardship Coordinator  
Indiana Division of Forestry  
402 W. Washington Street, Rm 296 W  
Indianapolis, IN 46204

### RE: Confirmation of SFI 2018 Surveillance Audit, Indiana DNR

Dear Ms. Huter:

As we discussed, I will be conducting the annual SFI surveillance portion of your joint (with FSC) audit as described in the attached itinerary. This letter is intended to meet the SFI audit planning requirements and will therefore focus on the SFI part of the work. A separate FSC audit plan will be provided by SCS Global.

As agreed, October 22-24, 2018 is scheduled for the 2018 audit of Indiana DNR Division of Forestry's conformance to the SFI 2015-2019 Standards and Rules®, Section 2 - Forest Management Standards. Please confirm that these dates are still appropriate.

The audit team will consist of:

- Ruthann Schulte – SFI Lead Auditor
- Beth Jacquemain – FSC Lead Auditor

### Preparing for the Audit

A key part of the audit is a review of selected evidence related to your program, which may include:

- Approval for logo usage (if used)
- Internal Audit records
- Management Review records
- Training records
- Documentation for operation of complaint procedure
- Documentation for subcontracting/outsourcing
- Policies regarding certification, health, and safety
- Additional documents requested during audit preparation call on October 3, 2018

Please have this information available for me **during the audit**.

### Role of SFI Inc. Office of Label Use and Licensing

As a reminder, your organization is responsible for contacting SFI, Inc. and complying with all requirements before using or changing any SFI label or logo. Your contact is:

Rachel Hamilton, Coordinator, Office of Statistics and Label Use  
Sustainable Forestry Initiative, Inc.  
343-803-0590  
[rachel.hamilton@sfiprogram.org](mailto:rachel.hamilton@sfiprogram.org)



### SFI Audit Scope

The scope of your certificate is: The Sustainable Forestry Initiative program including land management operations on approximately 158,264 acres of Indiana State Forests and related sustainable forestry activities. The 2018 SFI Surveillance Audit is a review of Objectives 3, 4, 5, 6, 13, 14, and 15 of your SFI Program to confirm that it is in conformance with the SFI 2015-2019 Standards and Rules®, Section 2 - Forest Management Standards. The State Forests to be visited are Clark and Harrison-Crawford as illustrated in the table below.

INDNR 2017 State Forests to Audit	2010	2011	2012	2013	2014	2015	2016	2017	2018
Owen Putnam	x			x			x		
Greene Sullivan	x			x			x		
Pike/Ferdinand		x			x			x	
Morgan Monroe			x	x			x		
Jackson Washington		x			x			x	
Selmier		x			x			x	
Martin		x			x			x	
Harrison Crawford			x			x			x
Clark			x			x			x
Yellowwood	x		x	x			x		
Salamonie/ Francis Slocum (Northern forests)									

### Agenda for Review

Attached for your review is the tentative agenda that will guide the conduct of the audit. Please contact me via email or phone if you would like to recommend changes or have any questions regarding what is needed for the audit.

### Audit Schedules and Travel Logistics

The overall schedule shown below was agreed to by all parties. More detailed daily schedules are to be developed as we finalize the site selection process. Upon receiving the list of activities for the past two years I will randomly select site for the two State Forests identified for site visits this year. The schedules will be reviewed and adjusted as needed during the opening meeting or in the field to accommodate any special circumstances.

Thank you for selecting NSF to provide your audit services.

Sincerely,

*Ruthann M. Schulte*

Ruthann M. Schulte

Lead Auditor, NSF

707-407-8599

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## Audit Agenda

### Type of Audit

- Readiness Review (Stage 1)       Registration (Stage 2)       Surveillance  
 Reassessment       Transfer       Verification  
 Other \_\_\_\_\_

### Audit Objectives

Determine if certification should be maintained.

### Schedule

Day/Date	Time	Activity/Process and Location to be Audited <i>Note: Include NSF number and/or address for each property as it appears on the certificate</i>	Auditor(s)
Monday October 22, 2018	TBD 9 or 9:30 AM	SFI and FSC Opening meetings	Schulte & Jacqmain
		Field site visits at Clark State Forest	Schulte & Jacqmain
	4:30 PM	Daily Briefing	Schulte & Jacqmain
		Travel to Harrison-Crawford State Forest	Schulte & Jacqmain
Tuesday October 23, 2018	8 AM	Field site visits at Harrison-Crawford State Forest	Schulte & Jacqmain
	4:30 PM	Daily Briefing	Schulte & Jacqmain
Wednesday October 24, 2018	8 AM	Field site visits at Harrison-Crawford State Forest	Schulte & Jacqmain
		Daily briefing	Schulte & Jacqmain
	3 PM	Auditors meet privately for final deliberations	Schulte & Jacqmain
	4 PM	Closing meeting	Schulte & Jacqmain

## Appendix 2

# Indiana Department of Natural Resources – Division of Forestry 2018 SFI Forest Management Public Summary Audit Report

## Introduction

The SFI program of Indiana Department of Natural Resources Division of Forestry (DOF) has demonstrated conformance with the SFI 2015-2019 Standard and Rules, Section 2 – Forest Management Standard in accordance with the NSF certification process.

### **Forest Management on Indiana State Forests**

Source: [http://www.in.gov/dnr/forestry/files/fo-Management\\_on\\_SF.pdf](http://www.in.gov/dnr/forestry/files/fo-Management_on_SF.pdf)

*“The State Forest system began with the establishment of Clark State Forest in 1903. Since then, the State Forest system has evolved into 13 State Forests containing more than 150,000 acres. State Forests have been managed for the many forest benefits that these lands are capable of providing. When the state acquired what is now State Forest property, almost every acre was comprised of eroding farm fields, pasture, or cutover timberland considered to have very little value to anyone. Most of the existing woodland had been high-graded, with the residual trees often exhibiting defects from forest fires and livestock grazing.*

*Many early management activities were aimed at stopping erosion and restoring the productive potential of the land. Tree planting to control erosion and reforest worn out fields was a primary management activity for many years. Early timber harvesting on state forests provided raw materials for projects of the Civilian Conservation Corps and utility poles for rural electrification projects. World War II saw the sustained use of timber sales from State Forests to provide needed wood materials for the war effort. Techniques used to manage the forests evolved as the forests grew. Less emphasis was needed on tree planting and more emphasis was placed on managing new stands of trees. Management activities, such as timber stand improvement and selective harvesting, were used to upgrade the quality of the stands and increase tree growth. This emphasis on stand improvement techniques continues today, with the goal of improving not only timber production but also all of the various forest resource benefits.*

*Increasing emphasis is being placed on creating early successional habitat, common in the early history of State Forests, but uncommon today.*

*Because the stands of trees on State Forests all began at about the same time, and because of the conservative nature of their management, most of the State Forests have matured at about the same rate, with little diversity among age classes and habitat types.*

*Based on current forest inventory data the State Forest system contains 1.379 billion board feet of standing sawtimber volume, and is growing 40.4 million board feet of volume per year.*

*Because of the need to increase forest habitat diversity (increase young forest), reduce dependence on general fund allocations, and the desire to demonstrate a working forest concept, the annual harvest target for Indiana State Forests is set at removing 14 million board feet—less than half the annual growth. This rate ensures the sustainability of the forest resource while providing a steady, stable source of certified-sustainable wood for the forest products industry and workers here in Indiana.*

*State Forests are being managed by professional foresters and resource specialists to demonstrate a working forest concept. A working forest is actively managed under a stewardship plan that guides its activities to accomplish the desired goals. The working forest can provide a variety of goods and services such as watershed protection, recreation, wildlife habitat, scenic beauty and wood products.”*

The audit was performed by NSF 22-24 October, 2018 by an audit team headed by Ruthann Schulte – SFI Lead Auditor. Audit team members fulfill the qualification criteria for conducting audits contained in SFI 2015-2019 Standards and Rules, Section 9 - Procedures and Auditor Qualifications and Accreditation.

The objective of the audit was to assess conformance of the firm’s SFI Program to the requirements of the SFI 2015-2019 Standard and Rules, Section 2 – Forest Management.

The scope of the audit included forest management operations. Forest practices that were the focus of field inspections included those that have been under active management over the planning period of the past 3 years. In addition, practices conducted earlier were also reviewed as appropriate (regeneration and BMP issues, for example), SFI obligations to promote sustainable

forestry practices, to seek legal compliance, and to incorporate continual improvement systems were also within the scope of the audit.

The SFI Standard was used without modifying any requirements.

## Audit Process

The audit was governed by a detailed audit plan designed to enable the audit team to efficiently determine conformance with the applicable requirements. The plan provided for the assembly and review of audit evidence consisting of documents, interviews, and on-site inspections of ongoing or completed forest practices.

During the audit NSF reviewed a sample of the written documentation assembled to provide objective evidence of conformance. NSF also selected field sites for inspection based upon the risk of environmental impact, likelihood of occurrence, special features, and other criteria outlined in the NSF protocols. NSF selected and interviewed stakeholders such as contract loggers, landowners and other interested parties, and interviewed employees within the organization to confirm that the SFI Standard was understood and actively implemented.

The possible findings of the audit included conformance, major non-conformance, minor non-conformance, opportunities for improvement, and practices that exceeded the requirements of the standard.

## Overview of Audit Findings

Indiana Division of Forestry's SFI Program was found to be in conformance with the standard. NSF determined that there were no minor non-conformances or opportunities for improvement.

NSF also identified the following areas where forestry practices and operations of Indiana Division of Forestry's SFI Program exceed the basic requirements of the standard:

3.1.3 Monitoring of overall best management practices implementation.

*Finding: The BMP monitoring program is the most robust known to the audit team.*

4.1.2 Development of criteria and implementation of practices, as guided by regionally based *best scientific information*, to retain *stand-level wildlife habitat* elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees.

*Finding: The Indiana Division of Forestry has an exceptional program to retain stand-level wildlife habitat elements in accordance with scientific information*

15.1.1 System to review commitments, *programs* and procedures to evaluate effectiveness.

*Finding: The DOF system is strong and works well.*



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## General Description of Evidence of Conformity

NSF's audit team used a variety of evidence to determine conformance. A general description of this evidence is provided below, organized by SFI Objective.

### Objective 1 Forest Management Planning

To ensure forest management plans include long-term sustainable harvest levels and measures to avoid forest conversion.

**Summary of Evidence:** *The Indiana State Forest Strategic Plan 2015-2019, Indiana DNR State Forest Properties Report of Continuous Forest Inventory (CFI) Summary of years 2013-2017, state forest tract management plans, and the associated inventory data and growth models were the key evidence of conformance.*

### Objective 2 Forest Health and Productivity

To ensure long-term forest productivity, carbon storage and conservation of forest resources through prompt reforestation, afforestation, minimized chemical use, soil conservation, and protecting forests from damaging agents.

**Summary of Evidence:** *Field observations and associated records were used to confirm practices. DOF has programs to ensure reforestation, for protection against damaging agents and wildfire, and for careful management of activities which could potentially impact soil and long-term productivity.*

### Objective 3 Protection and Maintenance of Water Resources

To protect the water quality of rivers, streams, lakes, wetlands and other water bodies through meeting or exceeding best management practices.

**Summary of Evidence:** *A program of adherence to and monitoring of State BMPs coupled with field observations of a range of sites were the key evidence. Auditors visited the portions of field sites that were close to water resources.*

### Objective 4 Conservation of Biological Diversity

To manage the quality and distribution of wildlife habitats and contribute to the conservation of biological diversity by developing and implementing stand- and landscape-level measures that promote a diversity of types of habitat and successional stages, and the conservation of forest plants and animals, including aquatic species, as well as threatened and endangered species, Forests with Exceptional Conservation Value, old-growth forests and ecologically important sites.

**Summary of Evidence:** *Use of the Natural Heritage Database, State Forest Procedure Manual, a comprehensive Environmental Assessment, the Nature Preserve program, State Wildlife Action Plan, State Forest Strategic Plan, field observations, policies for the conservation of the Indiana bat, and employment of an experienced wildlife biologist were the evidence used to assess the requirements involved in biodiversity conservation.*

### Objective 5 Management of Visual Quality and Recreational Benefits

To manage the visual impact of forest operations and provide recreational opportunities for the public.

**Summary of Evidence:** *Indiana Division of Forestry provides excellent recreational opportunities for the public including walking, biking, and horse trails, camping and access to lakes and ponds. Records and field sites were reviewed to assess methods and results in visual management.*

### Objective 6 Protection of Special Sites

To manage lands that are geologically or culturally important in a manner that takes into account their unique qualities.

**Summary of Evidence:** *Field observations of completed operations, records of special sites, interviews with staff archeologist, and visits to special sites were all factors in the strong finding for protection of special sites.*

### Objective 7 Efficient Use of Fiber Resources

To minimize waste and ensure the efficient use of fiber resources.

**Summary of Evidence:** *Field observations of completed operations, contract clauses, and discussions with supervising field foresters provided the key evidence.*

### Objective 8 Recognize and Respect Indigenous Peoples' Rights

To recognize and respect Indigenous Peoples' rights and traditional knowledge.

**Summary of Evidence:** *Policies and systems for receiving and responding to requests were used to determine conformance.*

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**Objective 9 Legal and Regulatory Compliance**

To comply with applicable federal, provincial, state and local laws and regulations.

*Summary of Evidence:* Field reviews of ongoing and completed operations and systems used to ensure conformance were the most critical evidence.

**Objective 10 Forestry Research, Science and Technology**

To invest in forestry research, science and technology, upon which sustainable forest management decisions are based and broaden the awareness of climate change impacts on forests, wildlife and biological diversity.

*Summary of Evidence:* DOF supports a variety of forestry research initiatives, including the Hardwood Ecosystem Experiment -- a collaborative research project that currently includes partnering organizations and agencies including researchers from six regional universities.

**Objective 11 Training and Education**

To improve the implementation of sustainable forestry practices through appropriate training and education programs.

*Summary of Evidence:* Training records of selected personnel, and records associated with harvest sites audited were the key evidence for this objective.

**Objective 12 Community Involvement and Landowner Outreach**

To broaden the practice of sustainable forestry through public outreach, education, and involvement, and to support the efforts of SFI Implementation Committees.

*Summary of Evidence:* Indiana Division of Forestry has annual state forest open houses that provide outreach, supplemented by the web site which has an on-line comment form.

**Objective 13 Public Land Management Responsibilities**

To participate and implement sustainable forest management on public lands.

*Summary of Evidence:* Indiana Division of Forestry seeks input into management decisions including the comment period for tract management plans, the most recent strategic plan, and the draft Indiana Bat Habitat Conservation Plan for State Forests. Each forest has annual state forest open houses that provide outreach.

**Objective 14 Communications and Public Reporting**

To increase transparency and to annually report progress on conformance with the SFI Forest Management Standard.

*Summary of Evidence:* Reports filed with SFI Inc. and the SFI Inc. website provided the key evidence.

**Objective 15 Management Review and Continual Improvement**

To promote continual improvement in the practice of sustainable forestry by conducting a management review and monitoring performance.

*Summary of Evidence:* Records of program reviews, agenda, and notes from management review meetings, and interviews with personnel from all involved levels in the organization were assessed.

## Relevance of Forestry Certification

Third-party certification provides assurance that forests are being managed under the principles of sustainable forestry, which are described in the Sustainable Forestry Initiative Standard as:

### 1. Sustainable Forestry

To practice *sustainable forestry* to meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates *reforestation* and the managing, growing, nurturing and harvesting of trees for useful products and *ecosystem services* such as the *conservation* of soil, air and water quality, carbon, *biological diversity*, *wildlife* and *aquatic habitats*, recreation and aesthetics.

### 2. Forest Productivity and Health

To provide for regeneration after harvest and maintain the productive capacity of the forest land base, and to protect and maintain *long-term* forest and soil *productivity*. In addition, to protect forests from economically or environmentally undesirable levels of wildfire, pests, diseases, *invasive exotic plants and animals* and other damaging agents and thus maintain and improve *long-term forest health* and *productivity*.

### 3. Protection of Water Resources

To protect water bodies and *riparian areas* and to conform with forestry *best management practices* to protect water quality.

### 4. Protection of Biological Diversity

To manage forests in ways that protect and promote *biological diversity*, including animal and plant species, *wildlife habitats*, and ecological or natural community types.

### 5. Aesthetics and Recreation

To manage the visual impacts of forest operations, and to provide recreational opportunities for the public.

### 6. Protection of Special Sites

To manage lands that are ecologically, geologically or *culturally important* in a manner that takes into account their unique qualities.

### 7. Responsible Fiber Sourcing Practices in North America

To use and promote among other forest landowners *sustainable forestry* practices that are both scientifically credible and economically, environmentally and socially responsible.

### 8. Legal Compliance

To comply with applicable federal, provincial, state, and local *forestry* and related environmental laws, statutes, and regulations.

### 9. Research

To support advances in sustainable forest management through *forestry* research, science and technology.

### 10. Training and Education

To improve the practice of *sustainable forestry* through training and education *programs*.

### 11. Community Involvement and Social Responsibility

To broaden the practice of *sustainable forestry* on all lands through community involvement, socially responsible practices, and through recognition and respect of *Indigenous Peoples'* rights and *traditional forest-related knowledge*.

### 12. Transparency

To broaden the understanding of forest certification to the *Fiber Sourcing* Standard by documenting certification audits and making the findings publicly available.

### 13. Continual Improvement

To continually improve the practice of forest management, and to monitor, measure and report performance in achieving the commitment to *sustainable forestry*.

### 14. Avoidance of Controversial Sources including Illegal Logging in Offshore Fiber Sourcing

*Applies only to the SFI 2015-2019 Fiber Sourcing Standard*

To avoid wood fiber from illegally logged forests when procuring fiber outside of North America, and to avoid sourcing fiber from countries without effective social laws.

**Source:** Sustainable Forestry Initiative® (SFI) Standard, 2015–2019 Edition



**For Additional Information Contact:**

Norman Boatwright	Daniel Freeman	Brenda Huter
NSF Forestry Program Manager	NSF Project Manager	Indiana DNR Division of Forestry – Central Office Forest Stewardship Coordinator
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**Appendix 3**

**SFI 2015-2019, Section 2: Forest Management Standard Audit Checklist**

FRS # NSF-SFI-FM-6L841 Indiana Department of Natural Resources Division of Forestry (DOF)

Date of audit: 22-24 November 2018

Auditors: Ruthann Schulte – SFI Lead and Beth Jacquemain – FSC Lead

**1.2 Additional Requirements**

*SFI Program Participants with fiber sourcing programs* (acquisition of roundwood and field-manufactured or primary-mill residual chips, pulp and veneer to support a forest products facility), must also conform to the *SFI 2015-2019 Fiber Sourcing Standard*.

Use of the *SFI* on-product labels and claims shall follow Section 5 - Rules for Use of *SFI* On-Product Labels and Off-Product Marks as well as ISO 14020:2000.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: INDOF does not have manufacturing facilities or source fiber.

**Objective 1 Forest Management Planning**

To ensure forest management plans include *long-term* sustainable harvest levels and measures to avoid forest conversion.

**Performance Measure 1.1**

*Program Participants* shall ensure that forest management plans include *long-term* harvest levels that are sustainable and consistent with appropriate *growth-and-yield models*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

1.1.1 Forest management planning at a level appropriate to the size and scale of the operation, including:

- a. a *long-term* resources analysis;
- b. a periodic or ongoing *forest inventory*;
- c. a land classification system;
- d. biodiversity at *landscape* scales;
- e. soils inventory and maps, where available;
- f. access to *growth-and-yield modeling* capabilities;
- g. up-to-date maps or a geographic information system (GIS);
- h. recommended sustainable harvest levels for areas available for harvest; and
- i. a review of non-timber issues (e.g., recreation, tourism, pilot projects and economic incentive *programs* to promote water *protection*, carbon storage, *bioenergy feedstock* production, or *biological diversity conservation*, or to address climate-induced ecosystem change).

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

1.1.2 Documented current harvest trends fall within long-term sustainable levels identified in the forest management plan.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

1.1.3 A *forest inventory* system and a method to calculate growth and yield.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

1.1.4 Periodic updates of *forest inventory* and recalculation of planned harvests to account for changes in growth due to *productivity* increases or decreases, including but not limited to: improved data, *long-term* drought, fertilization, *climate change*, changes in forest land ownership and tenure, or *forest health*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

1.1.5 Documentation of forest practices (e.g., *planting*, fertilization and thinning) consistent with assumptions in harvest plans.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Performance Measure 1.2

*Program Participants* shall not convert one *forest cover type* to another *forest cover type*, unless in justified circumstances.

1.2.1 *Program Participants* shall not convert one *forest cover type* to another *forest cover type*, unless the conversion:

- a. Is in compliance with relevant national and regional *policy* and legislation related to land use and forest management;
- b. Would not convert *native* forest types that are rare and ecologically significant at the *landscape* level or put any *native* forest types at risk of becoming rare; and
- c. Does not create significant long-term adverse impacts on Forests with Exceptional Conservation Value, old-growth forests, forests critical to threatened and endangered species, and special sites.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

1.2.2 Where a *Program Participant* intends to convert another *forest cover type*, an assessment considers:

- a. *Productivity* and *stand* quality conditions and impacts which may include social and economic values;
- b. Specific ecosystem issues related to the site such as invasive species, insect or disease issues, riparian *protection* needs and others as appropriate to site including regeneration challenges; and
- c. Ecological impacts of the conversion including a review at the site and *landscape* scale as well as consideration for any appropriate mitigation measures.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Performance Measure 1.3

*Program Participants* shall not have within the scope of their certification to this *SFI Standard*, forest lands that have been converted to non-forest land use. Indicator:

1.3.1 Forest lands converted to other land uses shall not be certified to this *SFI Standard*. This does not apply to forest lands used for forest and *wildlife* management such as *wildlife* food plots or infrastructure such as forest roads, log processing areas, trails etc.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

## Objective 2 Forest Health and Productivity

To ensure *long-term* forest *productivity*, carbon storage and *conservation* of forest resources through prompt *reforestation*, *afforestation*, *minimized* chemical use, *soil conservation*, and protecting forests from damaging agents.

### Performance Measure 2.1

*Program Participants* shall promptly reforest after final harvest. Indicators:

2.1.1 Documented *reforestation* plans, including designation of all harvest areas for either natural, planted or direct seeded regeneration and prompt *reforestation*, unless delayed for site-specific environmental or *forest health* considerations or legal requirements, through *planting* within two years or two *planting* seasons, or by planned *natural regeneration* methods within five years.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.1.2 Clear criteria to judge adequate regeneration and appropriate actions to correct understocked areas and achieve acceptable species composition and stocking rates for *planting*, *direct seeding* and *natural regeneration*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.1.3 Plantings of exotic tree species should minimize risk to native ecosystems.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.1.4 *Protection* of desirable or planned advanced *natural regeneration* during harvest.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.1.5 *Afforestation programs* that consider potential ecological impacts of the selection and *planting* of tree species in non-forested *landscapes*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Performance Measure 2.2

*Program Participants* shall *minimize* chemical use required to achieve management *objectives* while protecting employees, neighbors, the public and the environment, including *wildlife* and *aquatic habitats*. Indicators:

2.2.1 *Minimized* chemical use required to achieve management *objectives*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.2.2 Use of least-toxic and narrowest-spectrum pesticides necessary to achieve management objectives.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.2.3 Use of pesticides registered for the intended use and applied in accordance with label requirements.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.



2.2.4 The World Health Organization (WHO) type 1A and 1B pesticides shall be prohibited, except where no other viable alternative is available.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.2.5 Use of pesticides banned under the Stockholm Convention on Persistent Organic Pollutants (2001) shall be prohibited.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.2.6 Use of *integrated pest management* where feasible.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.2.7 Supervision of forest chemical applications by state- or provincial-trained or certified applicators.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.2.8 Use of management practices appropriate to the situation, for example:

- a. notification of adjoining landowners or nearby residents concerning applications and chemicals used;
- b. appropriate multilingual signs or oral warnings;
- c. control of public road access during and immediately after applications;
- d. designation of streamside and other needed buffer strips;
- e. use of positive shutoff and minimal-drift spray valves;
- f. aerial application of forest chemicals parallel to buffer zones to *minimize* drift;
- g. monitoring of water quality or safeguards to ensure proper equipment use and *protection* of streams, lakes and other water bodies;
- h. appropriate transportation and storage of chemicals;
- i. filing of required state or provincial reports; and/or
- j. use of methods to ensure *protection of threatened and endangered species*.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Performance Measure 2.3

*Program Participants* shall implement forest management practices to protect and maintain forest and soil *productivity*. Indicators:

2.3.1 Process to identify soils vulnerable to compaction, and use of appropriate methods, including the use of soil maps where available, to avoid excessive soil disturbance.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.3.2 Use of erosion control measures to *minimize* the loss of soil and site *productivity*.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.3.3 Post-harvest conditions conducive to maintaining site *productivity* (e.g., limited rutting, retained down woody debris, *minimized skid trails*).

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.





2.3.4 Retention of vigorous trees during partial harvesting, consistent with scientific silvicultural standards for the area.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.3.5 Criteria that address harvesting and site preparation to protect soil *productivity*.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.3.6 Road construction and skidding layout to *minimize* impacts to soil *productivity*.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

**Performance Measure 2.4**

*Program Participants* shall manage so as to protect forests from damaging agents, such as environmentally or economically undesirable wildfire, pests, diseases and *invasive exotic plants and animals*, to maintain and improve *long-term forest health, productivity and economic viability*. Indicators:

2.4.1 *Program* to protect forests from damaging agents.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.4.2 Management to promote healthy and productive forest conditions to *minimize* susceptibility to damaging agents.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

2.4.3 Participation in, and support of, fire and pest prevention and control *programs*.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

**Performance Measure 2.5**

Program Participants that deploy improved planting stock, including varietal seedlings, shall use best scientific methods. Indicator:

2.5.1 *Program* for appropriate research, testing, evaluation and deployment of *improved planting stock, including varietal seedlings*.

- N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Objective 3 *Protection and Maintenance of Water Resources*

To protect the water quality of rivers, streams, lakes, *wetlands* and other water bodies through meeting or exceeding *best management practices*.

#### Performance Measure 3.1

*Program Participants* shall meet or exceed all applicable federal, provincial, state and local water quality laws, and meet or exceed *best management practices* developed under Canadian or U.S. Environmental Protection Agency–approved water quality *programs*.

Indicators:

3.1.1 *Program* to implement federal, state or provincial water quality *best management practices* during all phases of management activities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The overall program for implementing BMPs is very strong. The State has developed and follows Indiana Logging and Forestry Best Management Practices [https://www.in.gov/dnr/forestry/files/fo-2005\\_Forestry\\_BMP\\_Field\\_Guide.pdf](https://www.in.gov/dnr/forestry/files/fo-2005_Forestry_BMP_Field_Guide.pdf)

The use of professional foresters to plan and oversee harvests, timber sale contracts with provisions to follow BMPs, pre-harvest meetings between foresters and logging contractors, sale supervision and weekly checklists signed by loggers, and the BMP audit system of every sale by a second-party comprise the program.

3.1.2 Contract provisions that specify conformance to *best management practices*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The Letter of Agreement for Sale of Timber on State Forest Land template contains a BMP clause– Item # 19. Review of the Letter of Agreement for Sale of Timber on State Forest Land for all sale files associated with site visits confirms the agreement has BMP and logger training clauses.

3.1.3 Monitoring of overall *best management practices* implementation.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: First party monitoring includes at least weekly site inspections with the results documented on the Timber Sale Visitation and Evaluations. Each sale is also officially “closed out” in regards to BMPs with an inspection by a BMP forester. Documentation was reviewed for the sites visited during the audit.

The BMP monitoring program is the most robust known to the audit team. The report titled Indiana Division of Forestry State Forest Properties 1997 through 2017 Forestry BMP Monitoring Results (<http://www.in.gov/dnr/forestry/7532.htm>) describes a long-term program of comprehensive second-party BMP audits that show high levels of implementation and effectiveness success protecting resources. The overall rates for forestry BMPs on state forests since 1996 are 86.10 percent application and 92.16 percent effectiveness in protecting the soil and water quality of the 619 sites monitored. In other words, 86.10 percent of the practices were applied as directed in the BMP guidelines, and another 13.24 percent were classified as minor departures.

#### Performance Measure 3.2

*Program Participants* shall implement water, *wetland* and *riparian protection* measures based on soil type, terrain, vegetation, ecological function, harvesting system, state *best management practices (BMPs)*, provincial guidelines and other applicable factors.

Indicators:

3.2.1 *Program* addressing management and *protection* of rivers, streams, lakes, *wetlands*, other water bodies and *riparian areas* during all phases of management, including the layout and construction of roads and *skid trails* to maintain water reach, flow and quality.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The use of BMPs, GIS, the design of all harvest projects by trained foresters, and the review of all projects by Central Office personnel comprise such a program. Further, there is an internal audit program for BMPs following all timber harvests (see 3.1.3 above). Harvest blocks (generally tracts), ridge-top roads, and skid road systems are designed to avoid stream crossings in harvests.

3.2.2 Mapping of rivers, streams, lakes, *wetlands* and other water bodies as specified in state or provincial *best management practices* and, where appropriate, identification on the ground.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Harvest site maps and flagging in the field showed locations of streams and stream buffers. Reviewed GIS layer.

3.2.3 Document and implement plans to manage and protect rivers, streams, lakes, *wetlands*, other water bodies and *riparian areas*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: This process begins with the maps included with the management guide prescriptions and is followed by the more specific timber sale map, on-going timber sale inspections, HQ final timber sale inspection and the annual summary of BMP implementation efforts on state lands.

Field observations confirmed protection of these features, including use of buffers, care taken to minimize stream crossings, but when necessary design proper stream crossings and to stabilize them following completion of work. Roads are well-designed and most are well-maintained.

3.2.4 Plans that address wet-weather events in order to maintain water quality (e.g., *forest inventory* systems, wet-weather tracts, definitions of acceptable operating conditions).

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed that the “BMP Field Guide – Road and Trail Maintenance” section provides general guidelines. Managers have the authority and responsibility to halt logging activities. Language relative to this is included in the Timber Sale Contracts.

Interviews with Resource Specialists and review of completed Timber Sale Visitation and Evaluations indicate that they work with the loggers regarding expectations that harvesting is halted when wet weather becomes an issue.

Challenges exist at several of the State Forests, including Harrison-Crawford, because of interim bat restrictions which preclude harvesting during the summer and early fall, which are the driest periods.

## Objective 4 Conservation of Biological Diversity

To manage the quality and distribution of *wildlife habitats* and contribute to the *conservation of biological diversity* by developing and implementing *stand-* and *landscape-level* measures that promote a diversity of types of *habitat* and successional stages, and the *conservation* of forest plants and animals, including *aquatic species*, *as well as threatened and endangered species*, *Forests with Exceptional Conservation Value*, *old-growth forests* and ecologically important sites.

### Performance Measure 4.1

Program Participants shall conserve biological diversity. Indicators:

4.1.1 Program to incorporate the *conservation of native biological diversity*, including species, *wildlife habitats* and ecological community types at *stand* and *landscape* levels.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** In the development of a sale the forester conducts an Ecological Resource Review which includes review of the Indiana Natural Heritage Database for any animal and plant species of significant concern and ecological resources. Information from this review is included in the Resource Management Guide prepared for the tract. The Division of Nature Preserves maintains the Natural Heritage Database.

Indiana Division of Forestry employs a full-time wildlife biologist, Scott Haulton. He has developed management guidelines for the foresters to use when they get "hits" on the database and he is also available for consultation on an as needed basis.

In addition, Scott's time is focused on special situations and on the HCP development effort for Indiana bat. The Indiana Division of Forestry has dedicated considerable resources to developing state-of-the-art bat conservation practices.

4.1.2 Development of criteria and implementation of practices, as guided by regionally based *best scientific information*, to retain *stand-level wildlife habitat* elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** The Indiana Division of Forestry has an exceptional program to retain stand-level wildlife habitat elements in accordance with scientific information as outlined in several documents:

- A comprehensive study was conducted of the State Forests and in 2008 the [Environmental Assessment](#): Increased emphasis on management and sustainability of Oak-Hickory communities on the Indiana state forest system 2008-2027 was published. The EA is being updated to include new data and additional species.
- State Forest Procedures Manual [Appendix I-H-1](#) is the Strategy for Indiana Bats.
- State Forest Procedures Manual [Appendix I-H-2](#) contains the Management Guidelines for Compartment-level Wildlife Habitat Features.

Typically, as part of the TSI inventory process, snags are tallied giving the forester a record of snags in the stand. Stand level wildlife elements were observed on the site visits.

4.1.3 Document diversity of *forest cover types* and age or size classes at the individual ownership or forest tenure level, and where credible data are available, at the *landscape* scale. Working individually or collaboratively to support diversity of *native forest cover types* and age or size classes that enhance *biological diversity* at the *landscape* scale.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** The [Indiana State Forest Strategic Plan 2015-2019](#) states the following goal: "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 forests (0-20 years old)."

Site visits confirm that efforts continue to work toward this goal; openings/ patch cuts are developing early successional forests, and reserves are designated.

Site visits also provided several examples of efforts to support diversity of native forest cover types such as harvesting planted pine to regenerate native hardwoods.

One of the field visit stops included discussion of an area that had been impacted by a tornado in 2012 and not only how that was address but also how it fits into the overall plan.

The Resource Management Guides include an inventory of these features at the tract level and the Continuous Forest Inventory (CFI) provides the information at the landscape level.

4.1.4 *Program Participants* shall participate in or incorporate the results of state, provincial, or regional *conservation* planning and priority-setting efforts to conserve biological diversity and consider these efforts in forest management planning. Examples of credible priority-setting efforts include state *wildlife* action plans, state forest action plans, relevant *habitat conservation* plans or provincial *wildlife* recovery plans.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Indiana Division of Forestry employs a full-time wildlife biologist, Scott Haulton. Much of his time is focused on special situations and on the HCP effort for Indiana bat, but he also provides support for regular work activities. The Indiana Division of Forestry has dedicated considerable resources to developing state-of-the-art bat conservation practices. Program for protection of and maintenance of Indiana bats and their habitat. The Environmental Assessment is being updated to include new data and additional species.

State Nature Preserves system has set aside and dedicated more than 3,000 acres of nature preserves on State Forest Lands, [including nearly 1,000 acres since January 2017](#).

The State Wildlife Action Plan ([SWAP](#)), approved in 2015, identifies conservation priorities to break the state into eco-regions in order to identify species groups on which to focus management.

Indiana’s Forest Action Plan takes the form of the [Statewide Forest Assessment & Strategy](#).

4.1.5 *Program* to address *conservation* of known sites with viable occurrences of significant species of concern.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: In the development of a sale the forester conducts an Ecological Resource Review which includes review of the Indiana Natural Heritage Database for any animal and plant species of significant concern and ecological resources. Information from this review is included in the Resource Management Guide prepared for the tract. The Division of Nature Preserves maintains the Natural Heritage Database.

Indiana Division of Forestry employs a full-time wildlife biologist, Scott Haulton. He has developed management guidelines for the foresters to use when they get “hits” on the database and he is also available for consultation on an as needed basis.

The Indiana Division of Forestry is drafting a Habitat Conservation Plan for the Indiana bat. During the development of the bat HCP all federally listed species must also be considered.

4.1.6 Identification and *protection* of *non-forested wetlands*, including bogs, fens and marshes, and *vernal pools* of ecological significance.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The property has very few of these features. Because of their rarity, such features are included in the Indiana Natural Heritage Database and would be identified during that search. When identified they would be considered during the management plan development process.

Non-forested wetlands were considered during the development of the 2008 the [Environmental Assessment](#): Increased emphasis on management and sustainability of Oak-Hickory communities on the Indiana State Forest system 2008-2027.

4.1.7 Participation in *programs* and demonstration of activities as appropriate to limit the introduction, spread and impact of *invasive exotic plants and animals* that directly threaten or are likely to threaten *native* plant and animal communities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The Indiana State Forest Strategic Plan 2015-2019, Statewide Forest Assessment, and Resource Management Guides all include sections on invasive plants.

The audit team reviewed several invasive control sites. Invasive control projects are implemented frequently during various stages of management.

The State Forest Procedure Manual [Section N](#) outlines the approach to invasives in sensitive areas.

Field site visits included several examples of invasive species treatments.

4.1.8 Consider the role of natural disturbances, including the use of prescribed or natural fire where appropriate, and *forest health* threats in relation to *biological diversity* when developing forest management plans.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The Indiana State Forest Strategic Plan 2015-2019 and other documents as well as interviews showed that programs and plans are developed based on disturbance ecology. Long-term trends of fewer fires, due to effective fire suppression, and the effects on biodiversity are understood. Silvicultural treatments are designed to emulate the natural disturbances where possible.

The use of prescribed fire was discussed at several site visit stops. Another of the field visit stops included discussion of an area that had been impacted by a tornado in 2012 and not only how that was address but also how it fits into the overall plan.

**Performance Measure 4.2**

Program Participants shall protect threatened and endangered species, Forests with Exceptional Conservation Values (FECV) and old-growth forests. Indicators:

4.2.1 Program to protect threatened and endangered species.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: In the development of a sale the forester conducts an Ecological Resource Review which includes review of the Indiana Natural Heritage Database for any animal and plant species of significant concern (including threatened and endangered species) and ecological resources. Information from this review is included in the Resource Management Guide prepared for the tract. The Division of Nature Preserves maintains the Heritage Database. Indiana Division of Forestry employs a full-time wildlife biologist, Scott Haulton. He has developed management guidelines for the foresters to use when they get "hits" on the database and he is also available for consultation on an as needed basis.

The Indiana State Forest Strategic Plan 2015-2019 states the following goal: "*Develop and implement a State Forest Habitat Conservation Plan for the federally endangered Indiana bat and the proposed listing of the northern long eared bat with the goal of obtaining an Incidental Take Permit from the U.S. Fish and Wildlife Service.*"

Interviewed the biologist to confirm the T&E program. Interim bat conservation measures are still in effect. During the development of the bat HCP all federally listed species are also considered.

4.2.2 *Program* to locate and protect known sites flora and fauna associated with viable occurrences of *critically imperiled* and *imperiled* species and communities also known as *Forests with Exceptional Conservation Value*. Plans for *protection* may be developed independently or collaboratively, and may include *Program Participant* management, cooperation with other stakeholders, or use of easements, *conservation* land sales, exchanges, or other *conservation* strategies.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The Natural Heritage Database that is checked during management plan development includes known T&E species, including G1 and G2 species. Results are documented on forms which were reviewed during the audit. When there are "hits" the Indiana Division of Forestry's Wildlife Biologist has developed management guidelines for the foresters to use but is also available for technical assistance as needed.

Forests of Exceptional Conservation Value are primarily included in the State's Nature Preserves managed by the Division of Nature Preserves some of which are on State Forest land. Management plans are developed for each individual nature preserve based on the unique features present. Several Nature Preserves were visited during the audit including a newly dedicated one in Clark SF.

4.2.3 Support of and participation in plans or *programs* for the *conservation* of *old-growth forests* in the region of ownership or forest tenure.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: There has been no old growth identified on State Forest lands. The CFI crew ages stands and identifies stands that could potentially fulfill the old growth criteria. Biologist Scott follows up with a site check.

The Nature Preserves are left to develop old growth features.

### Performance Measure 4.3

*Program Participants* shall manage ecologically important sites in a manner that takes into account their unique qualities. Indicators:

4.3.1 Use of information such as existing natural heritage data or expert advice in identifying or selecting ecologically important sites for *protection*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: In the development of a sale the forester conducts an Ecological Resource Review which includes review of the Indiana Natural Heritage Database for any animal and plant species of significant concern (including threatened and endangered species) and ecological resources. Information from this review is included in the Resource Management Guide prepared for the tract. The Division of Nature Preserves maintains the Natural Heritage Database.

Indiana Division of Forestry employs a full-time wildlife biologist, Scott Haulton. He has developed management guidelines for the foresters to use when they get "hits" on the database and he is also available for consultation on an as needed basis.

4.3.2 Appropriate mapping, cataloging and management of identified ecologically important sites.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Nature preserves are mapped and available on the Nature Preserve [website](#). Several Nature Preserves were visited during the audit.

During management plan development if there are positive results on the Natural Heritage Database search a map is printed out and included in the tract file as confidential information for use by the forester but not made publicly available.

GIS layers were reviewed by auditor and files were examined for maps.

### Performance Measure 4.4

*Program Participants* shall apply knowledge gained through research, science, technology and field experience to manage *wildlife habitat* and contribute to the *conservation of biological diversity*. Indicators:

4.4.1 Collection of information on *Forests with Exceptional Conservation Value* and other *biodiversity*-related data through *forest inventory* processes, mapping or participation in external *programs*, such as NatureServe, state or provincial heritage *programs*, or other credible systems. Such participation may include providing non-proprietary scientific information, time and assistance by staff, or in-kind or direct financial support.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The Division of Nature Preserves (DNP) monitors each Nature Preserve (Forests with Exceptional Conservation Value) either annually or biennially. The monitoring includes threats to the preserve including invasive species, primary natural communities, and assessment of the health of the community. The ecologist will then share the information with the DOF and discuss any problems and potential solutions.

Annual reports from the [Hardwood Ecosystem Experiment](#) (HEE) and articles published by the HEE inform management decisions. Staff work with and assist various HEE projects and DOF provides financial support.

4.4.2 A methodology to incorporate research results and field applications of *biodiversity* and ecosystem research into forest management decisions.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: The 2017 Indiana DNR, [Division of Forestry Annual Report](#) provides a comprehensive summary:

Wildlife & Research Support and Output

In 2017, the DoF provided direct support to 15 research projects investigating the ecological effects of forest management on State Forests. All of this support went to researchers involved with the Hardwood Ecosystem Experiment (HEE, <https://heeforeststudy.org/>), a long-term project based at Morgan-Monroe and Yellowwood. DoF, in 2017, provided support to 10 graduate/postgraduate researchers working on questions related to forest management and ecological impacts. DNR Forestry-supported researchers published nine articles in peer-reviewed scientific journals in 2017. HEE accomplishments since 2006 include 51 peer-reviewed research articles, 24 theses and dissertations, and five peer-reviewed extension publications and technical report collections. In



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2017, two new extension videos were produced featuring HEE research. All HEE videos are available for free viewing at the Purdue Extension Education Store:

<https://mdc.itap.purdue.edu/> or linked through the HEE website (<https://heeforeststudy.org/videos/>)

- Sustaining Our Oak-Hickory Forests (FNR-542-WV).
- Wildlife Responses to Timber Harvesting (FNR-543-WV).

Recent Select Hardwood Ecological Experiment Project Summaries:

In 2017, research on the use of clearcuts by bird species that breed within mature forest concluded. Publications reporting the findings of this project are expected in the coming year. Several species associated with mature forests were captured using early successional areas during summer, including worm-eating warbler, cerulean warbler, scarlet tanager, wood thrush and ovenbird.

A recently completed bat study found that recent shelter-wood establishment cuts at Morgan-Monroe and Yellowwood were among the areas used most by species such as Indiana bat, Northern long-eared bat, red bat, and tricolored bat. Similar to earlier HEE studies, no evidence was found showing any bat species avoided harvested areas.

State-of-the-art genetic sequencing techniques are being used at HEE to identify prey consumed by Indiana bats and Northern long-eared bats. The goal of the study is to learn how these bat species contribute to the control of forest and agricultural pests. Insects can be identified to family or genus, although species-level capabilities are also expected as the research progresses. To date, nearly 500 prey items have been identified as being consumed by both bat species.

Radio-tracked Indiana bats and Northern long-eared bats continue to use recently harvested sites and forest openings for roosting during the summer maternity period. Ongoing research focuses on multiple Indiana bat maternity colonies at Morgan-Monroe and Yellowwood. Findings indicate female Indiana bats select maternity roosts located in canopy gaps, edges and openings. Radio-tracked Indiana bats and Northern long-eared bats appear to preferentially forage in recently harvested patch cuts and thinned hardwood stands.

Long-term studies of the state-endangered cerulean warbler continued at HEE research units. Since 2007, researchers have found that average relative abundance of males in unharvested control units (3.8 km<sup>2</sup>) has been consistently lower than in even-age (7.33 males/km<sup>2</sup>) and uneven-age (7.67 males/km<sup>2</sup>) experimental harvest units. This time period includes two years of no harvesting and nine post-harvest years in even-age and uneven-age treatments.

Annual reports from the Hardwood Ecosystem Experiment (HEE) and articles published by the HEE inform management decisions. Staff work with and assist various HEE projects and DNR provides financial support.

One specific example of research informing management decisions is in the development of the bat HCP. There was very little information to source so HEE researchers designed projects to inform the development of the bat HCP.

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## Objective 5 *Management of Visual Quality and Recreational Benefits*

To manage the visual impact of forest operations and provide recreational opportunities for the public.

### Performance Measure 5.1

*Program Participants* shall manage the impact of harvesting on *visual quality*. Indicators:

5.1.1 Program to address visual quality management.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Trained foresters are involved in all aspects of harvest planning and execution. The use of trained foresters and the department’s sale review process (which considers visual issues) constitute a program. Particular emphasis is made on visual quality management adjacent to recreation areas, without an effort to “hide” active forestry.

Procedure Manual Section F: Silvicultural guidelines:

*“Uneven-age systems provide for some of the other benefits that state forests provide to users. Aesthetically the relatively unbroken canopies maintain their appeal and visual continuity. Human management intervention appears less severe than under even-age systems. The continuous canopy cover benefits some wildlife species that are area sensitive. With their limited disturbance, even-age systems do not appear to offer a distinct advantage over uneven-age systems in the maintenance of some species or community types in the Central Hardwoods.”*

*“State forest timber management should create a forested condition that is healthy and vigorous without fiber production being an overriding consideration. The forests should have a natural rather than planted look. There should be varied species composition, forest structure, and tree size to provide habitat diversity and aesthetic integrity within a contiguous-canopy forest context.”*

These decisions are left to the discretion of the forester. Appropriate visual buffers were observed on several site visit stops. Additionally, occasionally, interpretive information is posted to educate the public about forest management activities and what the public is seeing.

5.1.2 Incorporation of aesthetic considerations in harvesting, road, landing design and management, and other management activities where visual impacts are a concern.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Interviews with foresters indicated that each one considers and balances aesthetics with forest management objectives.

Observed visual buffers, careful placement of landings, neat and somewhat debris-free landings after harvests, and slash management near recreational trails.

### Performance Measure 5.2

*Program Participants* shall manage the size, shape and placement of clearcut harvests. Indicators:

5.2.1 Average size of clearcut harvest areas does not exceed 120 acres (50 hectares), except when necessary to meet regulatory requirements, achieve ecological *objectives* or to respond to *forest health* emergencies or other natural catastrophes.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Most regeneration openings are under 10 acres, and those larger than 20 acres have significant retention including clumps. Openings smaller than 10 acres are not considered clearcut by DOF. The size of clearcuts in 2017-2018 was 26 acres total – (two clearcuts: 11 acres and 15 acres) If all small openings were figured into the calculation the average acreage would be much smaller due the higher number of small openings. The total area of the smaller openings was 120 acres. With the goal of maintaining 10% of the forest at an early successional stage it is anticipated that more even-age harvests will be integrated moving forward. One field visit stop illustrated this focus by including larger openings. The openings included appropriate retention.

5.2.2 Documentation through internal records of clearcut size and the process for calculating average size.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Clearcut # and size are documented on the Form 200 for each forest. The Property Program Specialist takes this data and enters it into a database and uses it to populate the DOF Property Timber Sale Summary report.

### Performance Measure 5.3

*Program Participants* shall adopt a *green-up requirement* or alternative methods that provide for *visual quality*. Indicators:

5.3.1 *Program* implementing the *green-up requirement* or alternative methods.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Target is for regeneration check at about 3 years after a sale the State Forest Timber Sale Post-Harvest Evaluation is completed to ensure green up so can apply remediation, if necessary, in years 3 and 4. Have never had to do remediation because regeneration is so abundant. Requirements are for five years about 1,000 stems.  
 Check for invasive species during the regeneration checks.  
 DOF is in the process of updating procedures so will have training after that.  
 Most openings are buffered by extensive “matrix” patches of mature hardwood forest treated with light improvement thinning.

5.3.2 Harvest area tracking system to demonstrate conformance with the *green-up requirement* or alternative methods.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: GIS is used on the State Forest level, as well as formal or informal tracking for regeneration checks. Maps show regeneration openings.

5.3.3 Trees in clearcut harvest areas are at least 3 years old or 5 feet (1.5 meters) high at the desired level of stocking before adjacent areas are clearcut, or as appropriate to address operational and economic considerations, alternative methods to reach the *performance measure* are utilized by the *Program Participant*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Clearcuts rarely used. Small and usually surrounded by thinning.  
 Regeneration openings were reviewed on site visits in the field. All had ample, tall regeneration within 3 years following harvests. If anything, the issue is too much regeneration. No adjacent clear-cuts were observed.  
 Openings are isolated within more-extensive lightly-treated portions of stands.

### Performance Measure 5.4

*Program Participants* shall support and promote recreational opportunities for the public. Indicator:

5.4.1 Provide recreational opportunities for the public, where consistent with forest management *objectives*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Indiana Division of Forestry provides excellent recreational opportunities for the public including walking, biking, and horse trails, camping and access to lakes and ponds.  
 The Deam Lake Recreation Area was part of the audit sites this year and includes campgrounds and horse campgrounds including horse stables.  
 The Indiana State Forest Strategic Plan 2015-2019 has a recreation goal as listed below:  
*“State Forest Recreation:*  
*Goal # 1: Improve State Forest recreation user experience by investing in infrastructure to bring water, wastewater treatment, camping sites, trails, education centers, lakes and other related capital assets up to market expectations with additional capital and preventative maintenance funding (Gov. Pence’s Roadmap 2014: Well-being of Hoosier Families & Communities).”*  
 Audit site visits covered many local and regional hiking trails, interpretive trails, a bike trail, an archery range, a State Recreation Area, recreation shelters, and campgrounds.

**Objective 6    Protection of Special Sites**

To manage lands that are geologically or *culturally important* in a manner that takes into account their unique qualities.

**Performance Measure 6.1**

*Program Participants* shall identify *special sites* and manage them in a manner appropriate for their unique features. Indicators:

6.1.1    Use of information such as existing natural heritage data, expert advice or stakeholder consultation in identifying or selecting *special sites* for *protection*.

N/A             Conforms             Exceeds             O.F.I.             Minor NC             Major NC

Audit Notes:    Cultural sites are considered in the Resource Management Guides.

There is an exceptional program for identifying and managing culturally important sites.

The Indiana State Forest Strategic Plan 2015-2019 has two goals regarding identifying special sites for protection and appropriate management:

*“Continue to review projects by the DOF Archaeologist to conserve and avoid significant impact on cultural and archaeological resources.” And “Continue to review the heritage database in formulating forest management decisions or conducting forest management operations, and avoid impacts to ecologically significant resources.”*

Indiana Division of Forestry has a robust cultural resources identification and protection program including employing a full-time archaeologist. Archaeological clearance is needed for all except the most minor ground disturbing activities. Any work on historic structures also requires clearance. Properties have awareness (lists) of cultural resources, and management activities avoid or buffer known cultural resource areas.

The DOF Archaeologist was interviewed and she showed the auditor the State Historic Architectural and Archaeological Research Database ([SHAARD](#)) which is one of the tools she uses. The database is maintained by the Division of Historic Preservation and Archaeology.

6.1.2    Appropriate mapping, cataloging and management of identified *special sites*.

N/A             Conforms             Exceeds             O.F.I.             Minor NC             Major NC

Audit Notes:    Special sites reviewed were mapped and protected, generally by buffering, from activities.

Resource Management Guides prepared in advance of each timber harvest document describes protection of known cultural resources and the need to contact the division’s forest archaeologist if any cultural resources are discovered. Harvest records include documentation describing cultural resources reviews. Interviewed AJ Ariens, Archaeologist, Indiana Division of Forestry. The archaeologist must sign off on each sale in order for it to move forward. Often she receives information about the sale at multiple points in the planning process.

Workers do basic maintenance to cemeteries as time allows. Location, condition and age of cemeteries are documented in the Department of Historic Preservation and Archaeology’s SHAARD Database.

Worked with cemetery restoration group at two cemeteries on State Forest land.



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## Objective 7 Efficient Use of Fiber Resources

To *minimize* waste and ensure the efficient use of fiber resources.

### Performance Measure 7.1

*Program Participants* shall employ appropriate forest harvesting technology and in-woods manufacturing processes and practices to *minimize* waste and ensure efficient utilization of harvested trees, where consistent with other *SFI Standard objectives*. Indicator:

7.1.1 *Program* or monitoring system to ensure efficient utilization, which may include provisions to ensure:

- a. management of harvest residue (e.g., slash, limbs, tops) considers economic, social and environmental factors (e.g., organic and nutrient value to future forests and the potential of increased fuels build-up) and other utilization needs;
- b. training or incentives to encourage loggers to enhance utilization;
- c. exploration of markets for underutilized species and low-grade wood and alternative markets (e.g., bioenergy markets); or
- d. periodic inspections and reports noting utilization and product separation.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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**Objective 8 Recognize and Respect *Indigenous Peoples'* Rights**

To recognize and respect *Indigenous Peoples'* rights and traditional knowledge.

**Performance Measure 8.1**

Program Participants shall recognize and respect Indigenous Peoples' rights. Indicator:

8.1.1 *Program Participants* will provide a written *policy* acknowledging a commitment to recognize and respect the rights of *Indigenous Peoples*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

**Performance Measure 8.2**

*Program Participants* with forest management responsibilities on public lands shall confer with affected *Indigenous Peoples* with respect to sustainable forest management practices. Indicator:

8.2.1 *Program* that includes communicating with affected *Indigenous Peoples* to enable *Program Participants* to:

- a. understand and respect traditional forest-related knowledge;
- b. identify and protect spiritually, historically, or culturally important sites;
- c. address the use of non-timber forest products of value to *Indigenous Peoples* in areas where *Program Participants* have management responsibilities on public lands; and
- d. respond to *Indigenous Peoples'* inquiries and concerns received.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

**Performance Measure 8.3**

*Program Participants* are encouraged to communicate with and shall respond to local *Indigenous Peoples* with respect to sustainable forest management practices on their private lands. Indicators:

8.3.1 *Program Participants* are aware of *traditional forest-related knowledge*, such as known cultural heritage sites, the use of wood in traditional buildings and crafts, and flora that may be used in cultural practices for food, ceremonies or medicine.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Indiana Division of Forestry is a public landowner; this Performance Measure does not apply.

8.3.2 Respond to *Indigenous Peoples'* inquiries and concerns received.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Indiana Division of Forestry is a public landowner; this Performance Measure does not apply.

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**Objective 9 Legal and Regulatory Compliance**

To comply with applicable federal, provincial, state and local laws and regulations.

**Performance Measure 9.1**

*Program Participants* shall comply with applicable federal, provincial, state and local *forestry* and related social and environmental laws and regulations. Indicators:

9.1.1 Access to relevant laws and regulations in appropriate locations.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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9.1.2 System to achieve compliance with applicable federal, provincial, state, or local laws and regulations.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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9.1.3 Demonstration of commitment to legal compliance through *available regulatory action information*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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**Performance Measure 9.2**

*Program Participants* shall take appropriate steps to comply with all applicable social laws at the federal, provincial, state and local levels in the country in which the *Program Participant* operates. Indicators:

9.2.1 Written *policy* demonstrating commitment to comply with social laws, such as those covering civil rights, equal employment opportunities, anti-discrimination and anti-harassment measures, workers' compensation, *Indigenous Peoples'* rights, workers' and communities' right to know, prevailing wages, workers' right to organize, and occupational health and safety.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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9.2.2 *Forestry enterprises* will respect the rights of workers and labor representatives in a manner that encompasses the intent of the International Labor Organization (ILO) core conventions.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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## Objective 10 Forestry Research, Science and Technology

To invest in *forestry* research, science and technology, upon which sustainable forest management decisions are based and broaden the awareness of *climate change* impacts on forests, *wildlife* and *biological diversity*.

### Performance Measure 10.1

*Program Participants* shall individually and/or through cooperative efforts involving *SFI Implementation Committees*, associations or other partners provide in-kind support or funding for forest research to improve *forest health*, *productivity* and sustainable management of forest resources, and the environmental benefits and performance of forest products. Indicators:

10.1.1 Financial or in-kind support of research to address questions of relevance in the region of operations. Examples could include, but are not limited to, areas of forest *productivity*, water quality, biodiversity, community issues, or similar areas which build broader understanding of the benefits and impacts of forest management.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

10.1.2 Research on genetically engineered trees via *forest tree biotechnology* shall adhere to all applicable federal, state, and provincial regulations and international protocols ratified by the United States and/or Canada depending on jurisdiction of management.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Performance Measure 10.2

*Program Participants* shall individually and/or through cooperative efforts involving *SFI Implementation Committees*, associations or other partners develop or use state, provincial or regional analyses in support of their *sustainable forestry programs*. Indicator:

10.2.1 Participation, individually and/or through cooperative efforts involving *SFI Implementation Committees* and/or associations at the national, state, provincial or regional level, in the development or use of some of the following:

- a. regeneration assessments;
- b. growth and drain assessments;
- c. *best management practices* implementation and conformance;
- d. *biodiversity conservation* information for family forest owners; and
- e. social, cultural or economic benefit assessments.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

### Performance Measure 10.3

*Program Participants* shall individually and/or through cooperative efforts involving *SFI Implementation Committees*, associations or other partners broaden the awareness of *climate change* impacts on forests, *wildlife* and *biological diversity*. Indicators:

10.3.1 Where available, monitor information generated from regional climate models on *long-term forest health*, *productivity* and *economic viability*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

10.3.2 *Program Participants* are knowledgeable about *climate change* impacts on *wildlife*, *wildlife habitats* and *conservation of biological diversity* through international, national, regional or local *programs*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.



**Objective 11 Training and Education**

To improve the implementation of *sustainable forestry* practices through appropriate training and education *programs*.

**Performance Measure 11.1**

*Program Participants* shall require appropriate training of personnel and contractors so that they are competent to fulfill their responsibilities under the *SFI 2015-2019 Forest Management Standard*. Indicators:

11.1.1 Written statement of commitment to the *SFI 2015-2019 Forest Management Standard* communicated throughout the organization, particularly to facility and woodland managers, and field foresters.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

11.1.2 Assignment and understanding of roles and responsibilities for achieving *SFI 2015-2019 Forest Management Standard objectives*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

11.1.3 Staff education and training sufficient to their roles and responsibilities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

11.1.4 Contractor education and training sufficient to their roles and responsibilities.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

11.1.5 *Program Participants* shall have written agreements for the use of *qualified logging professionals* and/or *certified logging professionals* (where available) and/or *wood producers* that have completed training *programs* and are recognized as *qualified logging professionals*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.



**Performance Measure 11.2**

*Program Participants* shall work individually and/or with *SFI Implementation Committees*, logging or forestry associations, or appropriate agencies or others in the *forestry* community to foster improvement in the professionalism of *wood producers*.  
Indicators:

- 11.2.1 Participation in or support of *SFI Implementation Committees* to establish criteria and identify delivery mechanisms for *wood producer* training courses and periodic continuing education that address:
- a. awareness of sustainable forestry principles and the SFI program;
  - b. best management practices, including streamside management and road construction, maintenance and retirement;
  - c. reforestation, invasive exotic plants and animals, forest resource conservation, aesthetics and special sites;
  - d. awareness of responsibilities under the U.S. Endangered Species Act, the Canadian Species at Risk Act, and other measures to protect wildlife habitat (e.g., Forests with Exceptional Conservation Value);
  - e. awareness of rare forested natural communities as identified by provincial or state agencies, or by credible organizations such as NatureServe, The Nature Conservancy, etc.
  - f. logging safety;
  - g. U.S. Occupational Safety and Health Administration (OSHA) and Canadian Centre for Occupational Health and Safety (CCOHS) regulations, wage and hour rules, and other provincial, state and local employment laws;
  - h. transportation issues;
  - i. business management;
  - j. public policy and outreach; and
  - k. awareness of emerging technologies.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

- 11.2.2 The *SIC*-approved *wood producer* training programs shall have a continuing education component with coursework that supports the current training programs, safety and the principles of sustainable forestry.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

- 11.2.3 Participation in or support of *SFI Implementation Committees* to establish criteria for recognition of logger certification programs, where they exist, that include:
- a. completion of *SFI Implementation Committee* recognized logger training programs and meeting continuing education requirements of the training program;
  - b. independent in-the-forest verification of conformance with the logger certification program standards;
  - c. compliance with all applicable laws and regulations including responsibilities under the U.S. Endangered Species Act, the Canadian Species at Risk Act and other measures to protect *wildlife habitat*;
  - d. use of *best management practices* to protect water quality;
  - e. logging safety;
  - f. compliance with acceptable *silviculture* and utilization standards;
  - g. aesthetic management techniques employed where applicable; and
  - h. adherence to a management or harvest plan that is site specific and agreed to by the forest landowner.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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**Objective 12 Community Involvement and Landowner Outreach**

To broaden the practice of *sustainable forestry* through public outreach, education, and involvement, and to support the efforts of *SFI Implementation Committees*.

**Performance Measure 12.1**

*Program Participants* shall support and promote efforts by consulting foresters, state, provincial and federal agencies, state or local groups, professional societies, *conservation* organizations, *Indigenous Peoples* and governments, community groups, sporting organizations, labor, universities, extension agencies, the *American Tree Farm System*® and/or other landowner cooperative *programs* to apply *principles* of sustainable forest management. Indicators:

12.1.1 Support, including financial, for efforts of *SFI Implementation Committees*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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12.1.2 Support, individually or collaboratively, education and outreach to forest landowners describing the importance and providing implementation guidance on:

- a. best management practices;
- b. reforestation and afforestation;
- c. visual quality management;
- d. conservation objectives, such as critical wildlife habitat elements, biodiversity, threatened and endangered species, and Forests with Exceptional Conservation Value;
- e. management of harvest residue (e.g., slash, limbs, tops) considers economic, social, environmental factors (e.g., organic and nutrient value to future forests) and other utilization needs;
- f. control of invasive exotic plants and animals;
- g. characteristics of *special sites*; and
- h. reduction of wildfire risk.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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12.1.3 Participation in efforts to support or promote *conservation* of managed forests through voluntary market-based incentive *programs* such as current-use taxation *programs*, *Forest Legacy Program* or *conservation* easements.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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**Performance Measure 12.2**

*Program Participants* shall support and promote, at the state, provincial or other appropriate levels, mechanisms for public outreach, education and involvement related to sustainable forest management. Indicator:

12.2.1 Periodic educational opportunities promoting *sustainable forestry*, such as

- a. field tours, seminars, websites, webinars or workshops;
- b. educational trips;
- c. self-guided forest management trails;
- d. publication of articles, educational pamphlets or newsletters; or
- e. support for state, provincial, and local *forestry* organizations and soil and water *conservation* districts.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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**Performance Measure 12.3**

*Program Participants* shall establish, at the state, provincial, or other appropriate levels, procedures to address concerns raised by loggers, consulting foresters, employees, unions, the public or other *Program Participants* regarding practices that appear inconsistent with the *SFI Standard principles* and *objectives*. Indicators:

12.3.1 Support for *SFI Implementation Committees* (e.g., toll-free numbers and other efforts) to address concerns about apparent nonconforming practices.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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12.3.2 Process to receive and respond to public inquiries. *SFI Implementation Committees* shall submit data annually to *SFI Inc.* regarding concerns received and responses.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Not examined in 2018.

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### Objective 13 *Public Land Management Responsibilities*

To participate and implement sustainable forest management on *public lands*.

#### Performance Measure 13.1

*Program Participants* with forest management responsibilities on *public lands* shall participate in the development of *public land* planning and management processes. Indicators:

13.1.1 Involvement in *public land* planning and management activities with appropriate governmental entities and the public.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** During the development of the 2015-2019 Indiana Division of Forestry Strategic Plan public comments accepted, reviewed, and plan changes considered. Revisions to the Strategic Plan are beginning and, as before, public comments will be accepted, reviewed, and plan changes considered.

The comprehensive Environmental Assessment is currently being updated and includes public input opportunities.

Resource Management Guides are put on web site during a 30-day comment period, and then moved to an "Archived" section.

There is a [public comment webpage](#) on the Division's website that provides various avenues for public comment.

Annual "State Forest Open Houses" and a comprehensive and well-organized web site contribute to an exceptional program for public involvement in public land management and planning. The open houses are not currently posted to the website. However, [a press release was distributed](#) by DNR.

13.1.2 Appropriate contact with local stakeholders over forest management issues through state, provincial, federal or independent collaboration.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** Open houses for the public are held at most state forest units each year. Some are even held during other public events (such as county fair) to make it more convenient for public participation. These are advertised in newspaper, on web-site, supplemented by direct mailing to neighbors.

Good neighbor letters are sent to adjacent landowners when activities will be occurring near neighbors.

Several cooperative projects were discussed during the audit such as:

- Horse group trail restoration on Clark SF
- Cemetery restoration project in Harrison-Crawford SF



### Objective 14 Communications and Public Reporting

To increase transparency and to annually report progress on conformance with the *SFI Forest Management Standard*.

#### Performance Measure 14.1

A *Program Participant* shall provide a summary audit report, prepared by the *certification body*, to *SFI Inc.* after the successful completion of a certification, recertification or surveillance audit to the *SFI 2015-2019 Forest Management Standard*. Indicator:

- 14.1.1 The summary audit report submitted by the *Program Participant* (one copy must be in English), shall include, at a minimum,
- a. a description of the audit process, *objectives* and scope;
  - b. a description of substitute *indicators*, if any, used in the audit and a rationale for each;
  - c. the name of *Program Participant* that was audited, including its *SFI* representative;
  - d. a general description of the *Program Participant's* forestland included in the audit;
  - e. the name of the *certification body* and *lead auditor* (names of the *audit team* members, including *technical experts* may be included at the discretion of the *audit team* and *Program Participant*);
  - f. the dates the audit was conducted and completed;
  - g. a summary of the findings, including general descriptions of evidence of conformity and any nonconformities and corrective action plans to address them, opportunities for improvement, and exceptional practices; and
  - h. the certification decision.

The summary audit report will be posted on the *SFI Inc.* website ([www.sfiprogram.org](http://www.sfiprogram.org)) for public review.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Confirmed the 2017, 2016, & 2014 Public Summary Reports are located on the SFI Inc. website.

#### Performance Measure 14.2

Program Participants shall report annually to SFI Inc. on their conformance with the SFI 2015-2019 Forest Management Standard. Indicators:

14.2.1 Prompt response to the *SFI* annual progress report survey.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Email on October 23, 2018 from Rachel Hamilton confirmed timely response to the most recent survey.

14.2.2 Record keeping for all the categories of information needed for *SFI* annual progress report surveys.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Indiana Division of Forestry maintains records of all activities and correctly completed the annual progress report survey.

14.2.3 Maintenance of copies of past survey reports to document progress and improvements to demonstrate conformance to the *SFI 2015-2019 Forest Management Standard*.

N/A       Conforms       Exceeds       O.F.I.       Minor NC       Major NC

Audit Notes: Report copies back to 2007 are on the DOF website.

## Objective 15 Management Review and Continual Improvement

To promote continual improvement in the practice of *sustainable forestry* by conducting a management review and monitoring performance.

### Performance Measure 15.1

*Program Participants* shall establish a management review system to examine findings and progress in implementing the *SFI 2015-2019 Forest Management Standard*, to make appropriate improvements in *programs*, and to inform their employees of changes.

Indicators:

15.1.1 System to review commitments, *programs* and procedures to evaluate effectiveness.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** System includes an annual management review which covers the SFI Program. It also includes an annual internal audit. Confirmed by a review of agenda that an annual review occurred October 15, 2018 and was attended by the management team including the State Forester, Assistant State Forester, Forest Certification Coordinator, Forestry Wildlife Specialist, Property Program Specialist, and Forestry Archaeologist. The review included a review of the internal audit findings, status of 2017 audit findings, 2018 certification audit schedule.

The process appears to be robust and effective.

This program is modest in size, with a very “flat” organizational structure, and has a remarkable degree of contact between the central office management and staff specialists and the property managers and resource specialists (foresters). Specialists in silviculture/operations, wildlife, and archaeology review every proposed activity and provide input on many projects. The system is highly effective at ensuring consistency of operations while allowing for needed variation based on local conditions.

15.1.2 System for collecting, reviewing, and reporting information to management regarding progress in achieving *SFI 2015-2019 Forest Management Standard objectives and performance measures*.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** Central office personnel review and approve projects, ensuring consistency and that senior management understands progress. For example, John Friedrich, Property Program Specialist reviews all proposed timber sales for completeness of paperwork and overall compliance and maintains overall timber harvest records. Assistant State Forester, Dan Ernst oversees the contracting of other services. An audit of ten percent of timber sales is conducted by counting stumps as a financial control measure, but one which provides an additional opportunity to view results of harvests. The system includes recordkeeping, reviewing, and reporting information to the SFI Team.

Several examples arose during the audit that verified that the system is strong and works well. Potential issues that may have fallen through the cracks with a less robust system were caught early in the process and never became a problem.

15.1.3 Annual review of progress by management and determination of changes and improvements necessary to continually improve conformance to the *SFI 2015-2019 Forest Management Standard*.

N/A     
  Conforms     
  Exceeds     
  O.F.I.     
  Minor NC     
  Major NC

**Audit Notes:** Confirmed by a review of agenda that an annual management review occurred October 15, 2018 and was attended by the management team including the State Forester, Assistant State Forester, Forest Certification Coordinator, Forestry Wildlife Specialist, Property Program Specialist, and Forest Archaeologist. The review included a review of the internal audit findings, status of 2017 audit findings, 2018 certification audit schedule.

The process appears to be robust and effective.

Management team internal audit review of property John, Scott, AJ, Brenda, and Dan. Review files and field and interact with State Forest staff.

Management team meets to discuss the findings and then presents those to Jack.

*(End SFI Forest Management Checklist)*

**Appendix 4**

**Field Site Visit Notes**

<b>Date: Monday, October 22, 2018 Schulte and Jacqmain at Clark State Forest</b>	
<b>FMU / location / sites visited</b>	<b>Activities / notes</b>
Clark State Forest Office	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	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	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.
C11 T2, 3, & 4 Sale 6301503	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.
<b>Date: Monday, October 22, 2018 Schulte at Clark State Forest and Deam Lake Recreation Area</b>	
<b>FMU / location / sites visited</b>	<b>Activities / notes</b>
Daisy Hill Horse Trail	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 6301702	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 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 visual buffer.
Deam Lake Recreation Area	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. Worked with Silver Creek Water District to install a new water tower. Important cooperative project for both DoF and the water district.
Outbrook Ravine Nature Preserve	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.



<b>Date: Monday, October 22, 2018 Jacqmain at Clark State Forest</b>	
<b>FMU / location / sites visited</b>	<b>Activities / notes</b>
Tract C10T11, Sale 6301802, 205 acres	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, and/or improving access. Initial locations for log landings directly adjacent to streams.
Tract C8T1,2, Sale 6301402, 140 acres	TSI contract planned for 4 patch cuts 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	Wildlife Project Management Area adjacent to previous tract, described above. Similar cover type that had been harvested about 15 years ago.
Horse trail into Tract C8T1/2	Water flow and sediment run-off evident along horse trail. Staff were knowledgeable about procedures, next steps, and routine to address trail damage.
Tract C1T8, Sale 6301701, 115 acres	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 per IN DoF procedures. Pine removed with some pine regeneration in stand.
<b>Date: Tuesday, October 23, 2018 Schulte and Jacqmain at Harrison-Crawford State Forest</b>	
<b>FMU / location / sites visited</b>	<b>Activities / notes</b>
Brownsfield planting	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	The fire trail is a good graveled road. The trail also provides access for disabled hunters.
C20 T8 Sale 6341804	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	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.
C29 T2 & 10 Sale 6341805	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 shagbark hickory seed trees. Fire damage on several trees from a fire in the late 1800s. Observed several Ailanthus that were mark for future removal.
C28 T2 Sale 6341702	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.
TC30 T7 Sale 6341803	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 Green Briar Cemeteries. The Harrison County Cemetery Restoration group worked with DoF staff to restore both cemeteries in September 2017.
C31 T5 Sale 6341602	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.
C31 T3	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>Date: Wednesday, October 23, 2018 Schulte and Jacqmain at Harrison-Crawford State Forest</b>	
<b>FMU / location / sites visited</b>	<b>Activities / notes</b>
C12 T7 Sale 6341802	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.
C18 T3 Sale 6341603	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 Archaeologist after noticing potential archaeological sites near sale area that were not previously identified.
Leavenworth Barrens Nature Preserve	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.
C16 T2 Sale 6341801	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	1.2-acre test plot of 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.







