

Indiana Division of Forestry

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

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

Reassessment Audit



NSF International

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NSF International Forestry Program Audit Report

A. Certificate Holder

Indiana Division of Forestry

NSF Customer Number

6L841

Contact Information (Name, Title, Phone & Email)

Brenda Huter, Forest Stewardship Coordinator
 Indiana DNR, Division of Forestry – Central Office
 402 W. Washington St. Rm. W-296
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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 four State Forests: Selmier, Jackson-Washington, Ferdinand (with Pike), and Martin.

C. Audit Team

Ruthann Schulte – SFI Trainee Lead Auditor
 Beth Jacqmain – FSC Lead Auditor
 Norman Boatwright – Team/Witness Auditor

Audit Dates

6-9 November 2017

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

None

E. Audit Results

No nonconformities or opportunities for improvement were identified.

F. Audit Planning

	Registration / Reassessment	Surveillance 1	Surveillance 2	Surveillance 3	Surveillance 4
Date	6-9 Nov. 2017	22-26 Oct. 2018	TBD	TBD	TBD
Owen Putnam					
Greene Sullivan					
Pike/Ferdinand	A				
Morgan Monroe					
Jackson Washington	A				
Selmier	A				



Martin	A				
Harrison Crawford					
Clark					
Yellowwood					
Salamonie/ Francis Slocum (Northern forests)					

Yes No N/A Accreditation logos (e.g. ANSI/ANAB) are utilized correctly in accordance with NSF SOP 14680 and SOP 4876. If no, a nonconformity should be issued.

For reassessment or re-certification audits, describe the organization’s performance and conformance to the standard(s) over the period of the certification. This includes a review of all audits since the registration or most recent reassessment and should take into consideration interactions between processes and locations, and external changes. Specify what records were reviewed to reach this conclusion.

Audit reports and management review records were reviewed for 2017, 2016, and 2015. SFI annual reports were also reviewed for the same 3 years which demonstrate organization’s performance and conformance to the SFI 2015-2019 standard requirements for the central office and all the regions in the scope of the audit. Interviews, document reviews, and observations support the continual performance of their program. The conclusion determined by NSF auditor is that the SFI system continues to be fully effective.

G. Appendices

- [Appendix 1:](#) Audit Notification Letter and Audit Agenda
- [Appendix 2:](#) SFI Forest Management Public Summary Report
- [Appendix 3:](#) Audit Standard Checklist - SFI Forest Management Standard
- [Appendix 4:](#) Field Site Visits
- [Appendix 5:](#) Meeting Attendance



Appendix 1
Audit Notification Letter and Audit Agenda



Audit Notification Letter

October 23, 2017

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

RE: Confirmation of SFI 2017 Reassessment Audit, Indiana DNR

Dear Ms. Huter:

As we discussed, I will be leading the SFI reassessment 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 was provided by SCS Global.

As agreed, the 2017 joint FSC and SFI audits of Indiana DNR Division of Forestry are scheduled for November 6-9, 2017 for the audit of your program's conformance to the SFI 2015-2019 Standards and Rules®, Section 2 - Forest Management Standards and the FSC P&C. Please confirm that these dates are still appropriate.

The audit team will consist of:

- Ruthann Schulte – SFI Trainee Lead Auditor
- Norman Boatwright, NSF-International – SFI team/Witness Auditor
- Beth Jacqmain – FSC Lead Auditor

The 2017 SFI Reassessment Audit is a full review of your SFI Program to confirm that it is in conformance with the above referenced Standard.

SFI Audit Scope

The Sustainable Forestry Initiative program including land management operations on approximately 158,264 acres of Indiana State Forests and related sustainable forestry activities. The audit will consider the entire SFI FM Standard since this is a reassessment audit.

Multi-Site Sampling Plan

Indiana DNR qualifies for multi-site sampling as provided within the Requirements for the SFI 2015-2019 Program: Standards, Rules for Label Use, Procedures, and Guidance, Section 9 Auditing Requirements.

The Indianapolis (central) office has general control and authority over the separate state forests. As such the program is eligible for a sampling approach involving field reviews of 2 to 4 of the 11 administrative units. We have selected 4 state forests due to their proximity and sizes. These forests were selected based on the time elapsed since previous audits. A portion of the field sites to be reviewed within each forest were selected randomly. Those selections are included below. In addition, we understand that staff will identify other sites to include in the field visits such as active harvest, Forests with Exceptional Conservation Value and/or HCVPs, invasive treatments, TSI, herbicide treatments, special recreation features, or road work of special note. Central office issues will be reviewed on Monday morning.

**INDNR 2017 State Forests to Audit**

	2010	2011	2012	2013	2014	2015	2016	2017
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		
Clark			x			x		
Yellowwood	x		x	x			x	
Salamonie/ Francis Slocum (Northern forests)								

Audit Schedules and Travel Logistics

The overall schedule shown below was agreed to by all parties. More detailed daily schedules are to be developed by your team as they finalize the site selection process, based on preliminary selections provided below. Final schedules should be emailed to all. The schedules will be reviewed and adjusted as needed during the opening meeting or in the field to accommodate any special circumstances.

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, Statistics and Label Use
 Phone: 343-803-0590
 Email: rachel.hamilton@sfiprogram.org

Information Request

A formal information request has been sent from the SCS Global office; while this request is generally directed to FSC issues much of that information will be of value to during the SFI evaluation. In addition, I request that you assemble the evidence for meeting the SFI requirements. The audit will cover the entire the Standard.

While printed material provided to the audit team at the start of the audit can be quite useful, the team also requests electronic copies of documents where possible. Receiving some of these documents, notably management plans for units to be visited, several days prior to the audits would be helpful.

We look forward to visiting you and evaluating continual improvement in your SFI Program. If you have any questions regarding this planned audit, please contact me.

Best Regards,

Ruthann M. Schulte

Ruthann Schulte
 Lead Auditor, NSF
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Enclosures:

- Agenda Overview
- Randomly selected sites for 2017 audit activities



Agenda Overview

Type of Audit

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

2017 Indiana State Forests FM Audit Proposed Agenda Overview – November 6-9, 2017

Date	Activity	Notes
Monday, November 6	SFI Opening Meeting and Selmier State Forest	
	SFI Opening meeting and document review at Indianapolis office	The FSC audit is a surveillance audit so the FSC auditor will not participate in the first day of the audit.
	Field site visits at Selmier State Forest	
	Travel to Seymour	Lodging: Seymour
Tuesday, November 7	FSC Opening Meeting and Jackson-Washington State Forest	
	FSC Opening Meeting	
	Field site visits in Jackson-Washington	
	Travel to Jasper (2.5-hour drive)	Lodging: Jasper
Wednesday, November 8	Pike and Ferdinand State Forests	
	Brief opening Meeting	
	Field site visits in Pike and Ferdinand	Lodging: Jasper
Thursday, November 9	Martin State Forest and Closing Meeting	
	Brief opening Meeting	
	Field sites in Martin	
	Final Issues/Deliberations	Audit Team meet privately
	Closing Meeting	
	End of Audit	Ruthann and Norman are transported to the IND airport Hilton Garden Inn by DNR

**Randomly Selected Sites of Timber Sales marked or completed 2015-2017****Property: Selmier State Forest (Monday Afternoon)**

Tract(s)	Date Sold	Date Closeout	Acres	MBF	Cords	Sale #
Tract 3	5/11/2017		72	200	89	

Property: Jackson-Washington State Forest (Tuesday)

Tract(s)	Date Sold	Date Closeout	Acres	MBF	Cords	Sale #
0924	9/12/2017	hasn't started	135	290,042	178.5	6351803
0301	9/13/2016	hasn't started	60	169,022	60.0	6351703
0111	6/25/2013	3/18/2016	64	358,540	151.7	6351307
0813,0820	9/12/2017	hasn't started	108	266,581	181.3	6351801

Property: Ferdinand and Pike State Forests (Wednesday)

Tract(s)	Date Sold	Date Closeout	Acres	MBF	Cords	Sale #
C9T2&3	6/15/2017	N/A	110	228	152	6311705
C9T1	6/15/2017	N/A	61	126	52	6311704
C12T2&3	6/4/2015	8/28/2017	180	414	156	6311504
C1T10	4/16/2015	9/26/2016	82.4	258	61	6311501

Property: Martin SF (Thursday Morning/Early Afternoon)

Tract(s)	Date Sold	Date Closeout	Acres	MBF	Cords	Sale #
C4T7	12/10/2015	6/20/2017	130	225,858	45.7	6361601
C4T4&3	12/10/2015	6/22/2017	114	228,392	95.1	6361602
C7T2&3	6/29/2017		170	352,547	408.9	6361701



Appendix 2
SFI Forest Management Public Summary Report

Indiana Department of Natural Resources – Division of Forestry 2017 SFI Forest Management Public Summary Audit Report

Introduction

The SFI program of Indiana 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

“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 less diversity among age classes and habitat types than should be exhibited in a well-managed forest.

Based on current forest inventory data the State Forest system contains 1.379 billion board feet of standing sawtimber volume, and is growing 22 million board feet (Doyle) 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 10 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 on 6-9 November 2017 by an audit team headed by Ruthann Schulte – SFI Lead Auditor, Beth Jacquain – FSC Lead, and Norman Boatwright – Team/Witness 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:

- 1.1.3 A *forest inventory* system and a method to calculate growth and yield.
Finding: The Indiana Division of Forestry has a remarkable continuous forest inventory system.
- 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.

Disposition of 2016 Opportunities for Improvement (closed)

CI 3.1.3. *Program* to implement federal, state or provincial water quality *best management practices* during all phases of management activities.

There is an opportunity to improve the documentation of conducting timber harvest BMP inspections on timber sales.

Findings: The Division of Forestry is reemphasizing the need to follow through on documentation and filing of documentation for timber sale inspection and monitoring in a variety of ways. This Opportunity for Improvement is closed.

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

There is an opportunity to improve the process of making safe abandoned wells located near walkways and horse trails.

Findings: The Division of Forestry has developed a new policy regarding closure of historic wells on State Forest lands to ensure the protection of these historic remnants and the safety of users of the forests. The process includes conducting training on the new policy. This Opportunity for Improvement is closed.

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 2012-2016, 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, Statewide Forest Environmental Assessment, 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.*

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 13 partnering organizations and agencies including researchers from six regional universities) on the Morgan-Monroe and Yellowwood State Forests.

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 SFI 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.



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
Audit Standard Checklist - SFI Forest Management Standard



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: 6-9 November 2017

Auditors: Ruthann Schulte – SFI Lead (Trainee), Beth Jacquemain – FSC Lead, and Norman Boatwright – Team/Witness Auditor

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: Harvest levels are set at 10 million board feet per year which is 50% of the conservative estimate of annual growth. This is a decrease of 2 mbf from previous harvest levels due to better data generated from Continuous Forest Inventory (CFI) plots and considering the increased mortality from overaged stands, disease, and drought.

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:

- a. DOF maintains a long-term resource analysis through its Strategic Plans, which are updated at 5-year intervals. Landscape-level objectives for forest management have been established in the current plan. The second tier of planning consists of 10-year state forest plans; reviewed plans for the state forests audited. The third tier consists of tract specific Resource Management Guides (RMG aka management plans). Reviewed RMGs for all harvest site visits.
- b. DOF uses data generated from its own CFI plots to maintain a forest inventory system;
- c. DOF uses a tract and stand based land classification system;
- d. Biodiversity is addressed in the Objective 4;
- e. DOF uses NRCS soil classification data and maps;
- f. See 1.1.3;
- g. DOF maintains topo maps and GIS with forest inventory, wildlife, harvests, and other information;

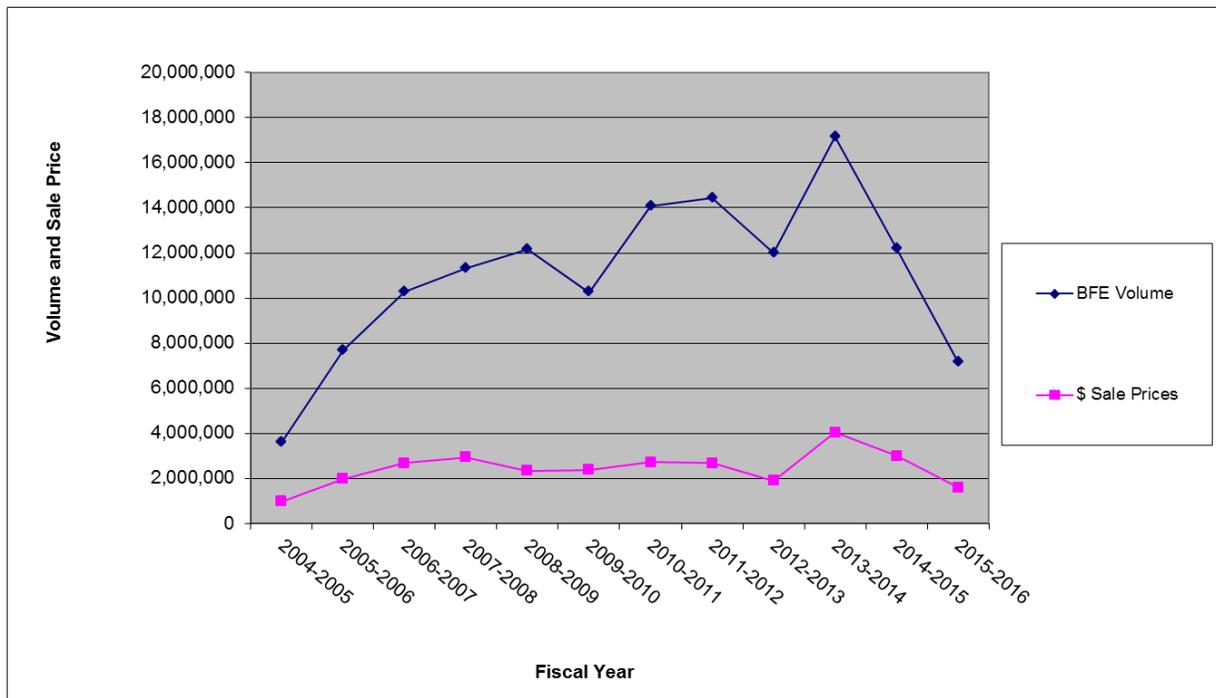
- h. DOF has documented its sustainable harvest levels in its production forests, based on growth data derived from the CFI process;
- i. Non-timber issues are addressed elsewhere in this checklist and include biodiversity, recreation, wildlife and T/E considerations.

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: Harvest levels are set at 10 million board feet per year which is 50% of the conservative estimate of annual growth. This is a decrease of 2 mmbf from previous harvest levels due to better data generated from CFI plots and considering the increased mortality from overaged stands, disease, and drought.

Timber Sale Volume and Sale Prices The Past Twelve Years



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: The Indiana State Forest Strategic Plan 2015-2019 states this goal: "Maintain a continuous forest inventory system that provides statistically significant resource data at the property level; measure 20% of field plots each year through the planning period (100% of plots visited by end year five.)" This program of inventory has been maintained despite challenges with staffing and turnover.

The Indiana Division of Forestry has 4½ full-time positions allocated to forest inventory (covering state lands and the private lands enrolled in the current-use taxation program).

A continuous forest inventory where 1/5 of the land base is inventoried each year is in the 10th year. This amounts to approximately 800 plots/year. The CFI process is set up to mirror the FIA system. The current growth estimate is based on data generated by the CFI program and currently is 10 million board feet which represents 50% of the total annual growth rate as calculated by the CFI data.

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: See 1.1.3.



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: Review of tracts files for forests visited indicates they have summary of activities. Also, forester inspects activity, completes Purchase Order Approval and turns it into HQ so the contractor can be paid. Individual forests create an annual report, Performance Goals Progress Reports (PGPR) that summarize management activities. Confirmed by review of the following PGPRs for 2017: Jackson-Washington, Fernand-Pike and Martin.

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: The forest management program does not convert native forest types to different types. Some areas with Virginia and other non-native pine growing on former farmland outside of the native range of the species are harvested with the goal of significantly reducing the pine component in the regenerated stand. These types are not native, are not rare, and do not impact Forests of Exceptional Conservation Value (FECV), old-growth, critical habitat or special sites.

- 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: All harvests are preceded by Resource Management Guides which address species composition. Confirmed by review of guides for harvest sites visited.

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: Interviews and review of GIS confirm there are no lands being converted to other land uses not allowed under this indicator.

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: Regeneration is generally addressed in the 5 and 10-year plans and specifically addressed in the resource assessments for each timber sale. Interviews with field foresters during site visits confirm that most harvesting activities are planned and executed with a long-term regeneration goal in mind; mostly for native mixed hardwoods including oak.

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: Site visits and travel through the various state forests did not identify any areas where regeneration was an issue. Where timber sale prescriptions call for regeneration, ocular regeneration checks are conducted by year 4, although not in every case, and methods to document are not consistent.

Program personnel provided evidence of system used to track regeneration and the timing of required regeneration checks. Management guides discuss regeneration where it is a desired outcome.

Criteria to judge adequate regeneration:

- Successful regeneration required within 5 years.
- Natural Regeneration: 1,000 native species seedlings/acre
- Tree plantings: 400 stems of native species/acre
- Management guides should include regeneration expectation statement

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: Indiana Division of Forestry doesn't plant exotic trees. Mostly plant native oak, generally a small number of acres confined to recently-acquired land to reforest former cropland. Some patch openings may be planted following removal of exotic pines planted decades ago on open lands.

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: Site visits to completed timber harvests indicate advanced regeneration is not adversely impacted during harvest. Most of the desirable natural regeneration consists of hardwood species that develop vigorous sprouts if damaged during harvesting.

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: Limited afforestation is currently being conducted. Indiana Division of Forestry returns small areas of non-forested land (typically fallow agricultural land) to forest. When it does plant former farmland, it plants only local indigenous species, mostly oak.



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: The DOF uses a fairly small group of herbicides to control vegetation for aquatic weed and algae control, control of woody species for timber stand improvement work and control of weeds for stand establishment and invasive control. Review of the 2017 herbicide use, amounts and areas applied, confirm that such use is minimized.

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: See 2.2.1.

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: Pesticide records and interviews with Indiana foresters who have licenses and who apply chemicals or supervise their application show that chemicals used and treatment needs match, per labels. Records include the following information:

Property Name; Date Used; Personnel; Location (Comp/Tract, other); Acres Treated; Pesticide Commercial Name; Active Ingredient; Gallons used; Work Type; Target Pest; "Method and comments; Include % solution and effectiveness comment".

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: Interview confirms forest chemicals are purchased centrally, and the purchasing manager checks the prohibited chemical list before prescribing to ensure that the selected chemical is not a violation. Review of chemicals used confirm they aren't on the list.

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: Interview confirms forest chemicals are purchased centrally, and the purchasing manager checks the prohibited chemical list before prescribing to ensure that the selected chemical is not a violation. Review of chemicals used confirm they aren't on the list.

2.2.6 Use of integrated pest management where feasible.

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

Audit Notes: Integrated pest management is indicated by the use of proper silviculture to maintain healthy, vigorous stands. Stands are generally properly stocked; assessments of forest health incidents determine causes before treatments are selected; treatments are based on site-specific prescriptions.

Salvage harvests are employed as needed, often in declining Virginia and red pine stands, but also pre-salvage of ash, to reduce or mitigate the impact and spread of insect pests.

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: Indiana Division of Forestry provides training to staff every November/December. Confirmed by review of training records for Forest Resource Specialists described above.

- 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: Integrated pest management is indicated by the use of proper silviculture to maintain healthy, vigorous stands. Stands are generally properly stocked; assessments of forest health incidents determine causes before treatments are selected; treatments are based on site-specific prescriptions.

Salvage harvests are employed as needed, often in declining Virginia and red pine stands, but also pre-salvage of ash, to minimize the impact and spread of insect pests.

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: Review of Resource Management Guides for all timber harvests visited indicates soils maps are used and the soil information is discussed in the write-up.

Soils mapping is available on GIS, and is of high quality. Interviews with resource specialists indicates soils maps are used during tract level planning in a variety of ways, including stand delineation, gross site index estimates, and on occasion, to plan for seasonal harvests mitigation and BMP planning (e.g. highly erosive soils).

- 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: Use of soil surveys in tract planning (pre-harvest), planned skid trails, and BMPs confirmed by review of the Resource Management Guides for the sites visited.

Pre-harvest meetings are conducted with loggers to review areas susceptible to erosion and determine the appropriate management activity.

- 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: Site visits did not identify any negative post-harvest conditions. DOF specialists conduct a BMP survey of every harvest area.

- 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: Site visits did not identify any significant issues with residual tree damage after partial harvests.



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: Resource Management Guides, timber Sale Contracts and many other documents and processes described above are in place to protect the soil.

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: Site visits did not include any new road construction. Existing roads appeared to be properly maintained relative to water quality issues.

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: Procedure Manual Section F: Silvicultural guidelines: ““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.”
During planning (resource management guides) and marking the harvest of mature or merchantable ash trees, drought impacted yellow poplar, and chestnut oak dieback is a priority (sanitation cutting).

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: See 2.14.1 above. Site visits and interviews with foresters confirm the DOF forest health is a major focus. The single-tree selection parts of sales focus on stand improvement, generally leaving the best trees and removing low-vigor trees. Confirmed by field observations that the indicator is met. Periodic selection harvests are used to control stocking and remove unhealthy trees. Operable, productive forest are treated on roughly a 15 or 20-year cutting cycle. Patch clear-cuts target old-field plantations of exotic pines.

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: “Revenue from state forest timber sales and recreation receipts go into the state forestry fund. Fifteen percent (15%) of the net receipts from timber sales go to the general funds of the counties in which the timber sales occurred. Fifty percent of the county receipts are available to local Volunteer Fire Departments that have cooperative fire agreements with DNR up to a maximum of \$1,000 per fire department. The remaining funds are allocated at the discretion of the county.” Source: Indiana State Forest Strategic Plan 2015-2019.

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: The DOF has 2 tree nurseries and 12 seed orchards. It also supports a forest geneticist that works with the Purdue Hardwood Coop Research Center. Currently, efforts focus on butternut, walnut, chestnut and white oak.

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

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, post-harvest inspections of all sites by a specialist, 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 contains a BMP clause– Item #9. Review of timber sale agreements for harvest sites visited confirms that each has the BMP requirement.

Specific examples include: review of the following Letter of Agreement for Sale of Timber on State Forest Land confirms the agreement has BMP and logger training clauses: Kinser Timber Products dated 10/6/2016 and Shady Oaks Logging dated 20/6/2016. All files associated with site visits were reviewed for these items and found to have them.

3.1.3 Monitoring of overall *best management practices* implementation.

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

Audit Notes: 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 2016 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 86.32 percent application and 92.39 percent effectiveness in protecting the soil and water quality of the 566 sites monitored. In other words, 86.32 percent of the practices were applied as directed in the BMP guidelines, and another 13.02 percent were classified as minor departures.

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 BMP’s with an inspection by a BMP forester. Documentation was reviewed for the sites visited during the audit.

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 supervisory 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. One example being there were no active harvest areas during the audit because of wet conditions.

Challenges exist at several of the State Forests 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 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 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 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 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.
- 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.

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. In addition, the Environmental Impact Statement for the Bat HCP will also take into account all species of conservation concern on the property including biodiversity and wildlife habitat.

There are [17 nature preserves on state forest land](#).

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 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.

Invasive treatments are occurring as part of the [Hoosier Hills and Highlands Oak Community Restoration Partnership](#) that received \$1 million funding from the [Joint Chiefs’ Landscape Restoration Partnership](#) between the U.S. Forest Service and the Natural Resources Conservation Service (NRCS).

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.

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 taken into account.

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.

Additionally, new sites are added as identified through Nature Preserve regional ecologist performing their duties, CFI, Statewide Forest Resource Assessment, and when the foresters consider "unique resources" during management plan development.

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. DOF does have an Old Growth Conservation Strategy that was updated in 2013. This characteristic is being added to the Ecological Resource Review and will be coupled with training.

The Nature Preserves are managed 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 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](#). Three nature preserves were visited during the audit. Maps and boundary signage were observed.

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 2016 Indiana DNR, Division of Forestry Annual Report provides a comprehensive summary: Wildlife & Research Support and Output

- In 2016, DNR Forestry provided direct support to 16 research projects investigating the ecological effects of forest management on State Forests. Most of the support went to researchers involved with the Hardwood Ecosystem Experiment (www.heeforeststudy.org/), a long-term project based at Morgan-Monroe and Yellowwood State Forests.
- DNR Forestry provided support to 10 graduate/postgraduate researchers in 2016 working on questions related to forest management and ecological impacts. Since 2006, DNR Forestry has provided support to 36 graduate and postgraduate researchers.

- DNR Forestry-supported researchers published 12 articles in peer-reviewed scientific journals and completed two master's theses in 2016.
- Two extension videos were produced featuring research of the Hardwood Ecosystem Experiment. Each are available for free viewing at the Purdue Extension Education Store: <https://mdc.itap.purdue.edu/>
 - Managing Woodlands for Birds (FNR-517-WV)
 - Forest Birds (FNR-518-WV)

Recent Select Hardwood Ecological Experiment (HEE) Project Summaries

- Indiana bats (federally endangered) and Northern long-eared bats (federally threatened) continue to use recently harvested sites and forest openings for roosting during the summer maternity period. Ongoing research focuses on two Indiana bat maternity colonies at Morgan-Monroe and Yellowwood state forests. 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 prefer foraging in recently harvested patch cuts.
- Two recently completed acoustic bat echolocation studies found that all State Forest bat species used experimental harvest areas as well as unharvested controls. Similar to earlier HEE studies, no evidence was found showing that any bat species avoided harvested areas.
- As in previous years, bird species associated with mature forest habitats dominated breeding-bird surveys conducted in experimentally harvested areas and unharvested controls. These commonly encountered species included worm-eating warbler, scarlet tanager, ovenbird, red-eyed vireo, Acadian flycatcher, and wood thrush.
- Research continued on the use of clearcuts by bird species that breed within mature forest. Several species associated with mature forests were captured using early successional areas during late summer, including worm-eating warbler, scarlet tanager and ovenbird.
- Long-term studies of the state-endangered cerulean warbler continued at HEE research units. Over the nine breeding seasons studied to date, researchers have found that average relative abundance of males in unharvested control units (3.88 km²) has been consistently lower than in even-age (7.57 males/km²) and uneven-age (6.74 males/km²) experimental harvest units. Overall reproductive success was slightly lower than in previous years (20.9%); however, the researchers note nest failures may have been influenced by weather events affected by the El Niño phenomenon.
- Recent surveys of the spider communities at HEE study areas resulted in the discovery of 23 species that were previously not known to be in Indiana. Additionally, two previously undescribed species were also discovered. Future work will determine the effect of prescribed fire on spider diversity at these experimental sites.

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.

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 (most have training in visual management) 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."

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. Two prime examples were stop #6 in Jackson County of the Jackson-Washington State Forest where the forester was planning a sale and taking into consideration visual impacts along Skyline Drive which is a tourist destination and stop #1 at Ferdinand State Forest where an opening was created on a road well-traveled by the public. An observation deck with educational information was installed to explain the opening and allow the public to observe the regeneration progression over time.

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. Average size of clearcuts 2016-2017 is 16.3 acres. If all small openings were figured into the calculation the average acreage would be much smaller due the higher number of small openings.

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: Clear-cutting is generally restricted to “regeneration openings” many of which already are vegetated. Most openings are buffered by extensive “matrix” patches of mature hardwood forest treated with light improvement thinning.

About 3 to 4 years after a sale the State Forest Timber Sale Post-Harvest Evaluation is completed to ensure green up.

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, 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: Many 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 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 Archeologist 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.



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: Utilization is monitored for all timber sales and documented on the timber sale inspection form. The DOF has a staff position for developing markets for its wood resources. There are challenges when there isn't a market for a species that the plan specifies for removal.



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: The Division of Forestry has a Cultural Resources Policy that includes acknowledging its commitment to recognize and respect of the rights of Indigenous Peoples.

Confirmed by review of the *Cultural Resource Management Policy and Procedure* that is maintained on the Division’s shared drive accessible by staff.

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: The Indiana Division of Forestry employs a full-time archaeologist who has knowledge about tribal history and tribal use of the lands in pre-historic times. The program for archaeological review includes on-site or records review of all land-disturbing activities, with field surveys for projects where potentially intact resources may be present. If evidence of pre-historic use is found the archeologist submits permit with the Indiana Division of Historic Preservation and Archaeology.

Interviewees in the Indiana Division of Forestry are aware of general aspects of past indigenous use of forests and resources, including hunting, gathering, and Wyandotte Chert which can be found in the Harrison-Crawford State Forest.

There are no federally-recognized tribes in the state, and existing groups are not known to be interested in gathering or using non-timber forest products from state forests. Any inquiries received would be responded to through normal processes. There is a policy and program for protecting all known historic and prehistoric archeological sites of potential significance, and most sites even if not significant and primary. Most known sites are historic (not tribal). Indiana Division of Forestry has contacted both local and federal tribes known to have been active in Indiana on two occasions, but not recently. Several responses were received but no concerns were voiced regarding the management of state forests.



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.

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: Web sites, including the Indiana Code on web <http://iga.in.gov/legislative/laws/2015/ic/>. Printed regulations booklet: "State of Indiana Department of Natural Resources: Rules Affecting the Public Use of Land, Water and Facilities Owned, Leased or Licensed by the Indiana Department of Natural Resources, Effective July 1, 2013".
Field foresters use the Indiana BMP manual, which has "Appendix D: Known Regulations – Summary of State and Local Forestry Regulations in Indiana Affecting Timber Harvesting".

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: Indiana Division of Forestry's policies and procedures incorporate the laws and regulations. Professional foresters, trained on the organization's policies, plan and oversee activities. Plans and proposed harvests are reviewed by Indiana Division of Forestry senior managers; these managers understand the laws. Proposed harvests are reviewed by the Property Program Specialist, John Friedrich, and other contracts by the Assistant State Forester, Dan Ernst. For construction projects (recreation-related mostly) the Indiana Department of Natural Resources Division of Engineering conducts advanced reviews.

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: An internet search did not locate any violations.
Interviews of Archeologist and Property Program Specialist who stated that there have not been any violations in their programs.
State Forester was interviewed and there were not any violations of regulations pertaining to forest management or the certified lands that occurred since the last audit or which are still open.

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: A written policy demonstrating Indiana DOF's commitment to manage certified lands in a manner consistent with the SFI 2015-2019 Standard is posted on the department's website. In addition, the department has several individual policies that fulfill these requirements.

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: Interview with the State Forester confirms the DOF has not "received (information) from outside stakeholders with regards to concerns or conformance pertaining to their employee relations with regards to ILO Core conventions 87, 98 and 111".

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: DOF provides direct financial support and staff work with and assist various HEE projects

The 2016 Indiana DNR, Division of Forestry Annual Report provides a comprehensive summary of research on the property:

Wildlife & Research Support and Output

- In 2016, DNR Forestry provided direct support to 16 research projects investigating the ecological effects of forest management on State Forests. Most of the support went to researchers involved with the Hardwood Ecosystem Experiment (www.heeforeststudy.org/), a long-term project based at Morgan-Monroe and Yellowwood State Forests.
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- Two recently completed acoustic bat echolocation studies found that all State Forest bat species used experimental harvests areas as well as unharvested controls. Similar to earlier HEE studies, no evidence was found showing that any bat species avoided harvested areas.
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- Research continued on the use of clearcuts by bird species that breed within mature forest. Several species associated with mature forests were captured using early successional areas during late summer, including worm-eating warbler, scarlet tanager and ovenbird.
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- Recent surveys of the spider communities at HEE study areas resulted in the discovery of 23 species that were previously not known to be in Indiana. Additionally, two previously undescribed species were also discovered. Future work will determine the effect of prescribed fire on spider diversity at these experimental sites.

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: The Indiana Division of Forestry does not conduct research on genetically engineered trees.

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:

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

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

Audit Notes: a. regeneration assessments: U.S. Forest Service’s FIA; and CFI on state forests and on private Classified Forest Land (800,000 acres approx. included in the CFI)
 b. growth and drain assessments: Jeff Settle contributes data to the US Forest Service’s primary processing survey (timber product output survey every five years by mill, county, and species. The last survey was in 2013).
 c. best management practices implementation and conformance: BMP surveys done on Indiana State Forests (every harvest) and on private Classified Forest Land (10% sample)
 d. social, cultural or economic benefit assessments: found in the Indiana Statewide Forest Assessment. Indiana Division of Forestry White Paper “[Forest Management and the Economy](#)”

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: Confirmed by interview that Biologist Scott Haulton monitors the US Forest Service Clearing House Climate Change tab and emails staff when significant changes occur.

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: Confirmed by interview that biologist, Scott Haulton, monitors the US Forest Service Clearing House Climate Change as well as the USGS bird atlas that monitors how climate change impacts birds.

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: Indiana State Forest Strategic Plan 2015-2019 includes a statement of commitment to the SFI 2015-2019 Forest Management Standard, as does the commitment letter signed by Jack Seifert, State Forester on October 17, 2015.

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: Brenda Huter is the management representative with overall responsibility for the program including tracking CARs and responses. Field-related objectives are the responsibility of foresters, while the other Objectives are covered by the central office.

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: Foresters, managers, and specialists interviewed have professional degrees (mostly in forestry) from major universities, and several involved in the 2017 audit have advanced degrees. Training records reviewed show regular professional development-training.

The DOF recommends that each state forester take courses that include at least 20 CFEs/year. Review of training records for 2017 for state forest foresters indicated the following: Jackson-Washington – Quentin Beahrs 51 hours, Brad Schneck 23 hours and Ross Danson 43 hours; Ferdinand-Pike – Jamie Winner 41 hours and Evan McDivitt 74 hours; Martin – Jim Lauck 15 hours and Joshua Kush 32.5 hours.

Interview with the State Forester indicates that state forest and HQ staffing levels are basically full.

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: Logger training requirements have been updated such that an active logging job must have, on-site, someone trained within the past 3 years to a logger training and BMP course.

INDNR coordinates logger training events which involves 2 training events annually where usually all modules are offered. INDNR currently funds the program through a grant.

INDNR also maintains the logger training database and makes it available on the IN Forestry Exchange website.

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: Review of the following Letter of Agreement for Sale of Timber on State Forest Land confirms the agreement has BMP and logger training clauses: Kinser Timber Products dated 10/6/2016 and Shady Oaks Logging dated 20/6/2016. Files for all sales visited were reviewed and found to have this clause as well.

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: There is no Indiana SIC. INDNR coordinates logger training events which involves 2 training events annually where usually all modules are offered. INDNR currently funds the program through a grant.
INDNR also maintains the logger training database and makes it available on the IN Forestry Exchange website.

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: There are no Indiana SIC. Logger training requirements have been updated such that an active logging job must have, on-site, someone trained within the past 3 years to a logger training and BMP course.

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: N/A since Indiana does not have a logger certification program or an active SFI Implementation Committee.

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: There is no Indiana SFI Implementation Committee. The INDNR coordinates and funds (via grants) the IN logger training program and maintains the database.

The DOF annually participates in and supports the Indiana Forestry Woodland Owners Association which promotes forestry across the state and also supports the Indiana Forestry Educational Foundation which provides grants to folks conducting forestry education events. Three DOF foresters are on the board.

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: The Indiana State Forest Strategic Plan 2015-2019 contains a section on public education about forestry and conservation. The agency is involved in considerable outreach and education for forest landowners, including information on its website and numerous brochures located at the state forest offices and trail kiosks.

The Indiana Division of Forestry website <http://www.in.gov/dnr/forestry/2845.htm> includes subpages or documents covering: getting help from a district forester, landowner grants and cost share assistance, tree planting, classified forests, and other topics.

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: The Indiana Division of Forestry has an active land acquisition program. Most acquisitions are to acquire inholdings, although there are some purchases of larger blocks to expand forests.

The Indiana State Forest Strategic Plan 2015-2019 states the following goal under the heading Land Ownership and Acquisitions: "Conserve important lands through strategic acquisitions, active resource management and boundary line management. Acquire 1,500 acres of lands of strategic and/or ecological importance to the long-term conservation of Indiana's working forests in partnership with non-governmental organizations, the Bi-Centennial Nature Trust, the Indiana Heritage Trust, and State Forest timber revenue."

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: There are two Nature Centers/Forest Education Centers operated at state forests. A forestry booth is set up at the Indiana State Fair. Property Newsletters and Annual Open Houses are important mechanisms to educate the public about sustainable forestry. Several forests have self-guided trails.

Review of the Performance Goals Progress Report for Pike – Fernand for 2016 indicates the foresters there participated in 389 good neighbor contacts and 2 user input activities; for Martin for 2016, the foresters there participated in 10 good neighbor contacts, 2 user input activities and 2 volunteer projects.

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: There is no Indiana SIC, see below.

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: The Indiana Division of Forestry has a system to track comments, including a database and a written summary. The division’s web-site provides an e-form where the public can input a comment or concern. Public comment forms are available to visitors; most are filled out by recreation users.

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: 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.

During the development of the 2015-2019 Indiana Division of Forestry Strategic Plan public comments accepted, reviewed, and plan changes considered.

20-Year Environmental Assessment is comprehensive, verging on an Environmental Impact Statement

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.

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:

- Mountain bike trail reroute in Ferdinand SF
- Cemetery restoration project in Harrison-Crawford SF
- Ultramarathon that will be held at Jackson 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) for public review.

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

Audit Notes: Confirmed the 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 November 2, 2017 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: Brenda has copies in her binder.
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 27, 2017 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 (faux) audit findings, status of 2016 audit findings, 2017 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 field unit 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 selected 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 review occurred October 27, 2017 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 (faux) audit findings, status of 2016 audit findings, 2017 certification audit schedule.

The process appears to be robust and effective.

(End SFI Forest Management Checklist)

Appendix 4
Field Site Visits

Date: Monday, November 6, 2017	
Indianapolis Central Office and Selmier State Forest	
Compartment/Tract * Denotes randomly selected site	Activities / notes
Central Office	SFI opening meeting for the audit
Central Office	Office Document Review
	Travel to Selmier SF
Site 1 – Pollinator yard	Cooperative project with the Jennings County Soil and Water Conservation District. This site is on an old log landing from 2012. The County seeded the log yard with pollinator habitat, posted an informational board about the project, and will use it for an education day when fifth graders come out to the State Forest for an annual trip. In the past the trip has included discussions about forestry, soils, and water quality. Now the pollinator station will be added on. The area can also be used as a landing for the upcoming harvest if needed.
Site 2 – Tract 3* Sale – sold but not active	Tract 3 is about 72 acres of upland hardwoods with quite a bit of tulip poplar and some pine plantings. Focus of harvest is on drought stressed tulip poplar and ash mortality from EAB. There are also a few small regeneration openings prescribed. Sale area marked for harvest. The area is flat and a good growth site so will regenerate tulip poplar. Some grapevine was found in the tract during marking so was cut. Interim bat measures were implemented.
Site 3 – Interpretive Trail	There is a 20 stop interpretive trail that runs through this State Forest. The trail was developed in conjunction with the County. A pamphlet teaches visitors about forestry topics including BMPs, water quality, and wildlife habitat. This provides the opportunity for recreation and public education in a working forest. The trail will be closed during harvest operations.
Site 4 – Cultural site in marked sale area (sale indicated in site 2)	A cultural site was known to exist in the harvest area. The staff archeologist was consulted. A 100' buffer around the site was identified. The area had been flagged and no trees were marked with the 100' buffer. Although the flagging had been removed, it will be replaced prior to harvest as well as describing the restrictions to the logging crew during the pre-harvest meeting. The harvest area is sold but it is not anticipated to be harvested over the winter.
Date: Tuesday, November 7, 2017 Jackson-Washington State Forest	
Jackson-Washington State Forest Office	FSC opening meeting for the audit
Schulte in Jackson County	
Compartment/Tract * Denotes randomly selected site	Activities / notes
Site 1 – C1 T11* Closed Sale	Pine and hardwood stand. 63 acres. Pine has been declining. Regeneration harvest with openings (20 acres total) to return the stand to native hardwoods. Sale closed out in 2015. TSI has been completed. File was reviewed and during operations there was an issue with rutting but it was addressed at the time and was no evidence was observed during the site visit. BMPs were observed. This was an area planted in pine by the CCCs. They also built structures on the site in the 1930s.
Site 2 – C1 T11 Hiking trails	A hiking trail borders the sale in site #1. During operations the trail was closed down. BMPs were installed on portion of trail along the sale unit. The area is close to the office so staff answered questions and educated the public as inquiries were made about



	operations. Aesthetics are considered on a case by case basis and balance visual issues with forest management.
Site 3 – C2 T17 Recently closed sale	Hardwood stand. 72 acres. Salvage harvest to remove poplar and oak impacted by drought. Sold in 2013 and closed in 2017, extension granted due to bat rules, wet erodible soil, and logger injury. Single tree selection with some openings (12 acres total). Ash removed in anticipation of EAB reaching the site. Harvest area includes an archery range that was closed during operations. Stream buffer observed.
Site 4 – C3 T1* Sold in 2016 not yet harvested	Oak hickory stand. 60 acres. Single tree selection with 1.6 acres opening to remove planted Loblolly and Virginia pine and regenerate to native hardwoods (yellow poplar, maple, oak, hickory, and black walnut). Observed opening boundary and property boundary.
Site 5 – C2 T15 Active operation but closed down during audit visit for wet weather	Hardwood stand with planted pine. 77 acres. Single tree selection with openings totaling 25 acres. Hardwood openings marked with boundaries and individual trees within marked as well. Pine opening boundary was marked and volume estimated – take all trees within boundary. Homestead in sale area. Flagging observed marking 100' buffer around the cultural site. Observed signage for trail closure.
Site 6 – C3 T15 Sale very early in the process – marked not approved	Hardwood stand. Single tree selection to remove overly mature and poorly formed trees. Group selection opening totaling 4 acres. New forester developing plan will consult with Property Manager and Property Program Specialist on marking close to road since Skyline Drive is a scenic road and a tourist destination. Fire tower in harvest area is a cultural feature so is considered. Observed skid trails marked on steep slopes. Discussion of skidding practices. Group relocated down the road to observe past skidding practices in similar circumstances on a closed sale. Area was inspected. Observed stable, seeded skid trails, and no evidence of significant disturbance.
Site 7 – Knobstone Glades Nature Preserve	The Knobstone Glades Nature Preserve is 60 acres in 3 blocks and is a Forest of Exceptional Conservation Value. Glades are forest openings with sparse herbaceous vegetation growing on and around bedrock outcroppings. Stunted gnarled-looking chestnut and blackjack oaks grow in and around these openings. The dry, open condition supports a number of prairie grasses as well. The area is periodically treated with prescribed fire. Observed signed boundary of nature preserve.
Site 8 – Bald Eagle Nest	The bald eagle was first observed in 2007 when developing a sale in the general area. At the time US Fish and Wildlife Service was consulted and guidance was followed. The nest has been observed by staff and has successfully fledged young every year since.
Site 9 – Nursery	The nursery grows about 3 million trees each year in a variety of species, primarily hardwood. Trees are sold to other forestry operations but some are used on State Forest lands for afforestation projects or the very limited circumstances where regeneration is inadequate and replanting is necessary.
Jacqmain and Boatwright in Washington County of Jackson-Washington State Forest	
Compartment/Tract * Denotes randomly selected site	Activities / notes
Jackson-Washington State Forest (JWSF): Starve Hollow State Forest	Site with 13-15 cabins built using wood from state forests. Lake dredging, hiking/mountain biking, beach picnic area, Forest Education Center, comfort station for RVs (showers), planted white oak to replace individual ash killed by EAB.
JWSF: Vallonia State Tree Nursery	3 million trees grown, predominantly hardwoods.
JWSF: C08T13, C08T20*	Sale set up, not yet cut. In two blocks 80 acres and 60 acres. Central hardwood stand. Primary species: Oak species, beech, sugar maple. Thinning. Examined log yard,



	boundaries, used old skid trails. TSI contract to remove unharvested, marked trees in the mid-story. Plan to spray invasives. Snag retention when safe and not impairing operations.
JWSF: C08T08	TSI focused on releasing walnut on 5 acres. A 90 acre stand mixed hardwoods, early to late successional stages. Post-harvest TSI to create more snags. Proposed Activities: Mark harvest/sell timber, Post-harvest TSI, Inventory and Mgt Guide. Species: Primarily sugar maple, American beech, oak species. 123.5 ba/ac, 91 BA sawtimber. Non-native Invasive Species include stilt grass and multi-flora rose.
JWSF: Seed orchard	Seed orchard for American chestnut with 15-16th and 31-32nd generations hybridized with Chinese chestnut species with resistance to chestnut blight.
JWSF: C10T41	Planting on 6 acres on old field with mixed bottomland hardwoods at 700-800 trees per acre. Species: burr oak, swamp white oak, pecan, cherrybark oak. Sprayed prior to planting, early spring 2017. Heavy deer browse.
JWSF: Cucumber magnolia	A 40-acre stand containing cucumber magnolia (<i>Magnolia acuminata</i>) managed by Nature Preserve. Discovered 1984 during timber sale marking. Instituted a protection area around the magnolia patches. Can be managed at Nature Preserve request. TSI work had been completed. Concerns: regeneration and recruitment may require active management and gap generation may be needed.
JWSF: C09T24*	Sale set up, 135 acres mixed hardwoods with selection thinning in Back County Area. Dying red pine being removed on about 5 acres. Old homestead site with filled in cistern, evaluated for safety. Knobstone trail runs through sale area. Trail will be closed and rerouted during the sale. Logger will be responsible for trail restoration after sale is completed.
JWSF: C11T18,19	Mixed hardwood selection harvest on 21 acres. Blowdown harvest 15-acre old field planted pine. Logging accident site, incident 10/17/16 with Investigator's report and conclusions.
JWSF: Land acquisition site	Land purchase under the President Benjamin Harrison Indiana Conservation Trust program in cooperation with the Wild Turkey Federation. Intersection existing state lands containing the Knobstone Trail. Purchased through the Division of Land Acquisitions.
Date: Wednesday, November 8, 2017 Ferdinand-Pike State Forest	
Ferdinand-Pike State Forest Office	Brief opening meeting for the day
Boatwright and Schulte in Ferdinand Section	
Compartment/Tract * Denotes randomly selected site	Activities / notes
Site 1 -- C1 T10* Closed sale. Completed 2017.	Hardwood stand. 82 acres. Single tree selection with 10 smaller openings and one larger 7 acre opening. Installed an observation deck with an informational board at the larger opening on the road to educate the public about forest management. On the walk through the harvest area observed embedded skid trails and some failing waterbars but observed no delivery of sediment to ephemeral watercourse. Obtained a copy of the BMP report from inspection conducted after sale closure that identified issues discussed with forester and accurately reflected what the auditors saw in the field.
Site 2 -- C2 T5 Oak regeneration experimental stand	This is a somewhat experimental stand. It is an old shelterwood in a pine stand, harvested in about 2005. The area has had TSI and was planted with an equal number of each black, red, and white oaks totaling 2,500 trees. The oaks are now being overtopped

	by poplar so there are plans to conduct a prescribed fire on 30 acres to encourage stronger oak regeneration.
Site 3 -- C1 T7 Closed sale. Completed 2017.	Hardwood stand with oak and poplar. Partial improvement thinning and partial salvage from 2016 storm blowdown (about 500 trees). Completed in fall 2017. The area has bike trails. An individual approached staff about rerouting a bike trail. Staff responded to the request and worked together with a volunteer group to reroute the trail. The trails were closed during operations in the area. A seep was identified in the corner of the sale and was clearly marked on the map to avoid. Saw several snags due to chestnut oak mortality.
Site 4 -- C3 T2, 3, 4, & 5 Closed sale. Completed 2012. Public hike 2017.	Single tree selection and openings on planted white and Virginia pine. Harvest to encourage native hardwood regeneration on a total of 332 acres. Yellow poplar and some oak regen observed. Neighbor had questions about the harvest. The forester offered to lead an informational tour. However, the neighbor preferred to conduct her own so obtained a permit and advertised a public tour to walk through the harvest area. Forester attended as a member of the public on his day off and answered questions.
Site 5 -- C8 T2 Open sale but not active during audit.	Hardwood stand – areas of oak/hickory, beech/maple and poplar. 119 acres of single tree removal with several small openings. Ash removed. Open sale harvest -- felled but not yarded. Tried to conduct logger interview but he wasn't working. Two home sites in sale area. One visited and observed buffer flagging. Forester identified the area as a potential cultural site so contacted the archeologist early on.
Site 6 -- C8 T1 Closed sale. Completed 2017.	Oak/hickory stand with pine component. Harvested August 2017. 80 acres selection harvest with openings. Improvement harvest with pine to native hardwood conversion. One area of Virginia pine left because of lack of market. Will leave in the stand as diversity. Two cultural features in sale area.
Site 7 -- C6 T11 Closed sale. Completed 2017.	Hardwood stand. 16 acres of single tree selection with small openings. Ephemeral stream crossing, no flow in channel during audit. Crossings minimized. Marked boundary observed. Tulip poplar and maple regeneration observed.
Site 8 -- Eagle Rock Site	Site with cultural features. Rock shelter under outcrop. This site includes a short waterfall and a large, flat area of sandstone bedrock. Thought to have been utilized in prehistoric period as well as by settlers. Outcrop used for seasonal camp shelter. Inhabitants processed resources in the area.
Jacqmain in Pike Section	
Compartment/Tract * Denotes randomly selected site	Activities / notes
Pike State Forest (PSF) C9T1*	Mixed hardwoods with openings for regeneration. Sold not yet cut. Mixed hardwoods with some short, eastern white, and Virginia pine with over 33 tree species in 61-acre stand. Thinnings, mixed with small gap productions for intolerant tree species. Boundary openings which are patch cut to remove planted off-site pine species and shift to other hardwood species regeneration, especially oak. Good advanced oak regeneration.
PSF: C9T2&3*	Sale set up, sold, not opened yet on 116 acres. Dominated by yellow poplar and sycamore with other hardwoods. Regeneration openings established along boundary, inspected. Conditions in contract for fire lane clearing and protection of pipeline ROW running through sale area. ROW protected by installed timber mats at designated points. Intermittent stream with bridge installed. BMPs specified for stream protections (no skid trails through and no log landings on).
PSF: C12T2&3*	Selection thinning completed on 180 acres. Protection in contract for recreation shelter, family campground, recreational trails and clean-up of trails. Discussions about inspection processes. Inspected skid trails, water bars, river crossing (no cut/equipment buffer for river). Forester found issues during sale administration, corrected and



	documented issues (damage to residuals and improperly installed water bars). Forester also documented fixing of issues.
PSF: C12T2&3A	Spray site for shrub honeysuckle along roadside departing previous site. Identified 2015, treated once, honeysuckle recovered and re-emerged this is 2nd treatment, 7/21/17. Foliar application, mapped, prescription and chemical information provided.
PSF: C12T1	Selection harvests, 152 acres, completed November 2015. Openings established, TSI and grapevine control. Landing and skid trail inspections. Conditions for road safety adjacent to county road. Discussions about wildlife habitat (bats, broad-winged hawks), snags, RTE, TSI work to complete clearing of openings.
PSF: C11T2,3,4	Inspected 2015 harvest site, 85 acres, main haul road, landings, and gates. Blowdown openings. Adjacent to Pike State Forest Horse Trail System. Conditions for clearing horse trails after harvest. Issues documented during sale administration inspections including drainage crossings, debris and limbs in creek (RMZ). Corrections documented. Cultural ID site. Discussion: logger qualifications and forester demonstration of on-line logger qualifications website.
PSF: Cultural feature	Commemorative stone installed in response to input from indigenous tribal outreach at old CCC building. DNR invited input and consulted with tribal representatives during the Indiana State bicentennial celebration. Tribal representatives oversaw installation.
PSF: Pike State Forest Fire Tower	Fire tower vandalism incident and site inspection. Damage to logger equipment and cooperation with law enforcement. Fire tower had been closed 10 years prior. A protective fence installed in 2016 following initial vandalizing incidents. In 2017 a logger's bulldozer left onsite was used to damage fence and gain access to closed fire tower. Perpetrators were identified from video footage. Case is currently being pursued in cooperation with local law enforcement.
PSF: C12T5,6	Blowdown salvage from storm 28 February 2011. There were 2 areas of blow down in about 4 acres with patch of White and Virginia pine with mixed hardwoods where a harvest had already been planned. After harvest TSI was done, 2013. Observed abundant snags and oak regeneration in sapling size classes. Oaks > 100/acre, also other abundant hardwood species including hickory, yellow poplar, sweet gum, sycamore, ash, cherrybark oak, and other oak species. Japanese honeysuckle identified for future treatment.
PSF: Cup Creek Acquisition	Old mining land acquired through the James Ellis Trust. Approximately 2,000 acres, mostly mined with some undisturbed patches. Property acquired 2007 although project started in early 2000's. Discussions: oak species planting, holding ponds, contamination remediation from mining releases (acid).

Date: Thursday, November 9, 2017 Martin State Forest

All three auditors

Compartment/Tract	Activities / notes
* Denotes randomly selected site	
Martin State Forest Office	Brief opening meeting for the day
Site 1 – C4 T7*	Thinning for improvement, salvage dead and dying ash on 130 acres. Landing inspections, TSI. Indiana Bat Restriction Zone discussion regarding bat habitat preferences and habitat protection requirements. Cost-data provided. Area had previously been part of an "old forest program" where the thought was to conduct no harvest there. However, research showed that this effort would result in a beech/maple stand and in order to develop/maintain oak stands management was needed.



Site 2 – C4 T4 (some 3) *	<p>The initial harvest included a 118-acre stand. Silvicultural experiment on 50 acres of the 118-acre stand for oak/hickory regeneration. Three treatments – all three received mid-story removal and will be burned with prescribed fire.</p> <p>The three different TSI treatments include variations on treatments of smaller stems and chemical applications.</p>
Site 3 – C4 T2	<p>Mixed hardwoods and oak-hickory stand covering about 100 acres. Area of pine to restore to hardwood, ideally oak/hickory. Thinning to improve crop trees, restore old field to forest, and salvage ash. Harvested quickly (2.5 weeks) with mechanical cutting. Stream crossing with no flowing water.</p>
Site 4 – C7 T2&3*	<p>Area has not been harvested in a long time due to inaccessibility. Sale not yet cut on 170 acres of a 211-acre stand. Improvement thinning removing mature oaks, poplars and undesired species. Stands of Virginia pine to convert back to hardwood. Stream crossing will be used and logs installed if water is flowing while operations are active. The access road is not drivable so will require a long skid, up to 1 mile from some areas. Discussions: stream crossings, crop tree criteria.</p>
2:30 – 3:30 PM	Auditor deliberations
3:30 PM	Closing Meeting

Appendix 5
Meeting Attendance



NSF Audit Attendance Sheet

Company Name Indiana DNR Division of Forestry

Location Jackson-Washington State Forest (7 November 2017)

Type of Audit SFI Reevaluation (FSC Surveillance)

Opening Meeting Date 6 Nov. 2017 Closing Meeting Date 9 Nov. 2017

NAME (Printed)	TITLE/POSITION	OPENING MEETING (Initials)	CLOSING MEETING (Initials)
Dan Ernst	Assistant State Forester	DE	
Brenda Huter	Forest Stewardship Coordinator	BH	
John Seifert	State Forester	JRS	
Norman Boatwright	Team/Witness Auditor	NB	
John Friedrich	Property Program Specialist	JF	
Quentin Beahrs	Forester 3	QB	
Ross Danson	Forester 3	RD	
Brad Schneck	Property Manager	BS	
AJ Ariens	Forest Archeologist	AA	
Scott Haulton	Wildlife Specialist	SH	
Ruthann Schulte	SFI Lead Auditor	RMS	
Beth Jaqmain	FSC Lead Auditor	BM	



NSF Audit Attendance Sheet

Company Name Indiana DNR Division of Forestry

Location Martin State Forest (9 November 2017)

Type of Audit SFI Reevaluation (FSC Surveillance)

Opening Meeting Date 6 Nov. 2017 Closing Meeting Date 9 Nov. 2017

NAME (Printed)	TITLE/POSITION	OPENING MEETING (Initials)	CLOSING MEETING (Initials)
Dan Ernst	Assistant State Forester	DE	DE
Brenda Huter	Forest Stewardship Coordinator	BH	BH
Norman Boatwright	Team/Witness Auditor	NB	NB
John Friedrich	Property Program Specialist	JF	JF
Jim Lauck	Property Manager	JL	JL
Joshua Kush	Resource Specialist	JK	JK
Scott Haulton	Wildlife Specialist	SH	SH
Ruthann Schulte	SFI Lead Auditor	RMS	RMS
Beth Jaqmain	FSC Lead Auditor	BJ	BJ
AJ Ariens	Forest Archaeologist	AA	AA
John Seifert	State Forester		JRS