

**Joint Forest Management and Chain-of-Custody
Certification Evaluation Report for the:**

**State Forest Lands Managed by the
Michigan Department of Natural Resources**

**Conducted under the Auspices of the SCS Forest Conservation Program
SCS is an FSC Accredited Certification Body**

**CERTIFICATION REGISTRATION NUMBER
SCS-FM/COC-090N**

Submitted to:

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Date of Certification: December 31, 2005

By:

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Organization of the Report

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the general public and is intended to provide an overview of the evaluation process, the management programs and policies applied to the forest, and the results of the evaluation. Section A will be posted on the SCS website (www.scs-certified.com) no less than 30 days after issuance of the certificate. Section B contains more detailed results and is conveyed only to the certification applicant which in this case is the Michigan Department of Natural Resources. As the certification applicant in this case is a public agency, the full evaluation report may be publicly available but only through the MDNR.

FOREWORD

Scientific Certification Systems, a certification body accredited by the Forest Stewardship Council (FSC), was retained by the Michigan Department of Natural Resources¹ to conduct a certification evaluation of its management of the Michigan state forest system, an estate of approximately 3.9 million acres located through the upper Lower Peninsula and through the Upper Peninsula. Under the FSC/SCS certification system, forest management operations meeting international standards of forest stewardship can be certified as “well managed”, thereby enabling use of the FSC endorsement and logo in the marketplace.

In late summer, 2005, an interdisciplinary team of natural resource specialists was empanelled by SCS, in conjunction with NSF/ISR, to conduct the evaluation. The team collected and analyzed written materials, conducted interviews and completed an 11-day field and office audit of the state forests as part of the certification evaluation. Upon completion of the fact-finding phase of the evaluation, the team determined conformance to the 47 applicable FSC Criteria in order to determine whether award of certification was warranted.

This report is issued in support of a recommendation to award FSC-endorsed certification to the Michigan Department of Natural Resources (MDNR) for the management of the Michigan state forestlands. As detailed below, certain pre-conditions (also known as Major Corrective Action Requests) that were stipulated by the audit team upon completion of the field audit were addressed by Michigan DNR and cleared by SCS prior to finalization of this report. In the event that a certificate is awarded, Scientific Certification Systems will post the public summary of this report on its web site (www.scscertified.com).

¹ This FSC evaluation was part of a dual SFI/FSC dual certification evaluation conducted in conjunction with NSF/ISR, a SFI-accredited certification body. For this project, NSF/ISR served as the prime contractor with MDNR, with SCS functioning as the sub-contracted provider of the FSC services. Per FSC requirements, the 5-year certification contract, if awarded, must be executed directly between MDNR and SCS.

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LIST OF ACRONYMS

ATV	All Terrain Vehicle
BMP	Best Management Practice
CAR	Corrective Action Request
CITES	Convention on International Trade of Endangered Species
COC	Chain of Custody
ERA	Ecological Reference Area
FMFM	Forest Management and Fire Management
FMU	Forest Management Unit
FSC	Forest Stewardship Council
HCVA	High Conservation Value Area
HCVF	High Conservation Value Forest
LP	Lower Peninsula of Michigan
MDNR	Michigan Department of Natural Resources
MNFI	Michigan Natural Features Inventory
NREPA	Natural Resources and Environmental Protection Act
NSF-ISR	National Sanitary Foundation/International Systems Registrar
OI	Operations Inventory
ORV	Off-road recreational vehicle
P&C	Principles and Criteria
REC	Recommendation
SCA	Special Conservation Area
SCS	Scientific Certification Systems
SFI	Sustainable Forestry Initiative
SWC	Statewide Council
SHPO	State Historic Preservation Office
UP	Upper Peninsula of Michigan
YOE	Year of Entry

SECTION A- PUBLIC SUMMARY AND BACKGROUND INFORMATION

1.0 GENERAL INFORMATION

1.1 FSC Data Request

Applicant entity	Michigan Department of Natural Resources
Contact person	Dennis Nezich, Forest Certification Specialist
Address	1990 US-41, South Marquette, MI 49855
Telephone	906-228-6501
Fax	517-373-2443
E-mail	nezichd@michigan.gov
Certificate Type	Single Forest Management Unit
Location of certified forest area	
Latitude	Approximately 43-48 degrees, north latitude
Longitude	Approximately 83-90 degrees, west longitude
Forest zone	Temperate
Total forest area in scope of certificate which is:	
privately managed	
state managed	3.75 million acres (excludes military lease lands)
community managed	
Number of forest workers (including contractors) working in forest within scope of certificate	Approximately 2000
Area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives	Approximately 1.2 million acres Note: this figure includes 750,000 acres of non-forested land.
Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services	NA
Area of forest classified as 'high conservation value forest'	Approximately 250,000 acres
List of high conservation values present	Under preparation
Chemical pesticides used	See Section A.1.4.8 of this report
Total area of production forest (i.e. forest from which timber may be harvested)	Approximately 2.5 million acres
Area of production forest classified as 'plantation' for the purpose of calculating the Annual Accreditation Fee (AAF)	NA—Michigan DNR does not practice “plantation forest management” as defined by the FSC
Area of production forest regenerated primarily by replanting ²	Approximately 500,000 acres
Area of production forest regenerated primarily by natural regeneration	Approximately 2 million acres
List of main commercial timber and non-timber species included in scope of certificate name and	Timber species: --- aspen (bigtooth & quaking), sugar maple, red maple, red pine, jack pine, oak. No non-timber species are included in the scope.
Approximate annual allowable cut (AAC) of commercial timber	Approximately 750,000 cords

² The area is the *total* area being regenerated primarily by planting, *not* the area which is replanted annually. Note that this area may be different to the area defined as a 'plantation' for the purpose of calculating the Annual Accreditation Fee (AAF) or for other purposes.

Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type	NA
List of product categories included in scope of joint FM/COC certificate and therefore available for sale as FSC-certified products (include basic description of product - e.g. round wood, pulp wood, sawn timber, kiln-dried sawn timber, chips, resin, non-timber forest products, etc.)	Standing trees, harvested and removed from the forest in log and chip form, by contract purchasers; logs are used for both solid-wood and fiber-based products

1.2 Management Context

As a public forest operation located in the State of Michigan, management of the Michigan State Forests is subject to a host of state and federal regulations. The principal regulations of greatest relevance to Michigan Department of Natural Resources in its management of the state forests are associated with the following statutes:

Pertinent Statutes at the Federal Level:

- Endangered Species Act
- Clean Water Act (Section 404 wetland protection)
- Occupational Safety and Health Act
- National Historic Preservation Act
- Archaeological and Historic Preservation Act
- Americans with Disabilities Act
- U.S. ratified treaties, including CITES and tribal treaties

Pertinent Statutes at State and Local Level:

- Natural Resources and Environmental Protection Act, 1994 PA 451 (NREPA), as amended:
 - Part 305, Natural Rivers
 - Part 351, Wilderness and Natural Areas
 - Part 355, Biological Diversity Conservation
 - Part 365, Endangered Species Protection
 - Part 525, Sustainable Forestry on State Forestlands
- Michigan DNR, 1994, Water Quality Management Practices on Forest Lands
- MIOSHA STD-1135, Dept. of Labor, General Industry Standards, Part 51, Logging

1.2.1 Environmental Context

The forests of the Lake States region were first established upon the end of the last glacial period, roughly 12,000 years ago. The forests presently found throughout Michigan fall under the classification as *temperate forest*; the principal forest cover types found on the state forests are discussed in Section 1.4.2 of this report.

During the latter part of the 19th century and the first third of the 20th century, the forests throughout the Lake States region were heavily exploited through high grading, commercial clearcutting and widespread wildfire of high intensity due to the massive amounts of logging slash. Essentially the entire forested region of Michigan burned at least once during this era of exploitation. As a result of this intensive past human intervention, there is very little in the way of virgin, old growth forest cover left in the state.

Michigan is one of the most heavily forested states in the Union with approximately 53% of the state in forest cover, totaling approximately 19.3 million acres (the 5th largest state). Forest cover in Michigan has increased by approximately 5% since 1980. The Michigan State Forests constitute approximately 21% of the state's total forest cover.

There are approximately 36,350 miles of rivers and streams located within Michigan, many of which run through the State Forests. Some of the regionally most significant anadromous river systems have substantial portions of their watersheds located on the State Forests.

Threatened and endangered wildlife species (either federally or state listed) among others found on the State Forests include: gray wolf, bald eagle, common loon, red-shouldered hawk, and Kirtland's warbler. Numerous state listed plant and animal species are also found within the State Forest system.

1.2.2 Socioeconomic Context

The State of Michigan has a total population of approximately 10 million people, with the major population centers located in the southern half of the Lower Peninsula. Some of the state forest units located in the L.P. are within a few hours drive of both the Detroit and Chicago metropolitan areas as well as second-tier population centers such as Grand Rapids, Lansing, and Bay City. The state forests constitute 59% of the outdoor recreation land in Michigan. The outdoor recreational desires of these millions of citizens has a profound impact on the state forests, as manifest through high levels of demand for ATV/ORV access, snowmobile trails, hunting and fishing opportunities as well as developed and dispersed camping. Accommodating this demand for outdoor recreational opportunities while protecting the ecological integrity of the state forests constitutes a major and, to some degree, an intractable management challenge for the DNR.

Michigan, located within the heart of the Great Lakes region, is a major timber state whose forest resources are an important part of the nation's wood supply. The state forests are an important source of pulpwood, sawlogs and veneer logs. Including recreation-driven economic activity, the Michigan state forests supports approximately 200,000 jobs (directly and indirectly) and generates some \$12 billion in total economic activity, annually (Source: DNR web site).

In addition to timber production and outdoor recreation, the state forests are an economically important source of oil and gas and other minerals.

1.3 Forest Management Enterprise

The subject of this forest certification evaluation is a public (state) forest operation managed by a state agency (Department of Natural Resources) within the executive branch of the Michigan state government.

1.3.1 Land Use

The state forests of Michigan support a variety of land uses, including:

- Outdoor recreation

 - ATV/ORV use

 - Snowmobile use

 - Hunting

 - Fishing

 - Camping in developed campgrounds

 - Dispersed camping

 - Hiking

 - Mountain biking

- Timber management and production

- Oil & gas leases

- Designated habitat for rare, threatened and endangered species

- Designated Natural Areas, Special Conservation Areas and Ecological Reference Areas

1.3.2 Land Outside of the Scope of this Certification Evaluation

With the exception of lands leased to the Michigan National Guard, all designated Michigan state forestlands are included in the scope of this certification evaluation. These lands, approximately 3.9 million acres in total, are organized into 15 forest management units (FMUs) located in both the Lower and Upper Peninsulas. MDNR manages other state lands that are not part of the state forest system and are not within the scope of this certification evaluation. These lands include state game areas and state wildlife management or research areas as well as state parks and recreation areas.

1.4 Management Plan

The “management plan” for the Michigan state forests is, on a de facto basis, comprised of a collection or body of numerous documents--some more current than others--associated with an array of planning processes at multiple spatial and temporal scales, some of which represent integrated plans for defined land units while other planning processes are focused on single issues, topics or uses (e.g., outdoor recreation, mesic conifers).

A recently developed document, *Operational Management Guidance for State-Owned Forest Lands*, provides a concise summary of some of the key elements of a statewide management

plan for the state forests; the document is available on the DNR web site:
<http://www.midnr.com/publications/pdfs/divisions/forest/ForestCertification/MyWebsFC/StatewidePlanning.htm>.

Current planning processes and initiatives include:

- Eco-regional Planning, as guided by the Forest Management Planning Guide for the Lake Superior State Forest.
- The Red Pine Project
- Biodiversity Conservation Planning Process
- FMFM Division Strategic Plan
- Wildlife Division Strategic Plan
- Natural Areas Program Strategic Plan
- Wildlife Conservation Strategy now known as the Wildlife Action Plan
- Candidate Conservation Agreement with Assurances (pending for two species)
- Species-specific resource planning employing work groups
- The Fisheries Division WART Plan
- Zoning based planning for the Natural Rivers program
- River Assessments
- State Comprehensive Outdoor Recreation Plan
- Parks and Recreation Bureau Stewardship Planning

This extensive array of planning initiatives notwithstanding, there remains a need for the DNR to develop a current large scale (eco-regional or state-wide) management plan(s) for the Michigan state forestlands.

1.4.1 Management Objectives

As presented in *Operational Management Guidance for State-Owned Forest Lands*, the DNR has a vision of the desired future conditions of DNR-managed forestlands that are related to long-term management goals. When these goals are fully achieved, the State Forests will:

- Sustain fundamental ecological processes and functions that, in turn, support representative, diverse, and productive biological assemblages
- Provide for a variety of ecosystem services that help sustain human civilization; examples include purification of air and water, carbon storage, and moderation of drought and flood conditions
- Provide for a variety of sustainable human values that are derived from ecosystems including economic, recreational, and intrinsic values.

These goals are tiered to the Department's fundamental mission statement:

The Department of Natural Resources is committed to the conservation, protection, management, use, and enjoyment of the State's natural resources for current and future generations.

1.4.2 Forest Composition

There are approximately 75 tree species found within the forests of Michigan, many but not all of which can be found on the State Forests. The two most prevalent forest cover types on the state forests are northern hardwood (maple-beech-birch) and aspen. Conifer cover types found on the state forests are red-white-jack pine, spruce-fir and northern white cedar.

Due to ownership patterns and owner objectives (particularly non-industrial timberland owners and public forests), the long range trend in Michigan is towards more mature forests with incrementally increasing average tree diameters. This overall pattern is partially offset by management regimes employed on industrial timberlands within the state.

Statewide, periodic growth/increment is roughly 2.5 times annual harvests, with the industrial timberlands being most intensively managed and non-industrial private and federal timberlands being the least intensively managed.

For a detailed overview of the forests of Michigan, see: *The Forests of Michigan*, by Donald Dickmann and Larry Leefers, published by The University of Michigan Press (2004).

1.4.3 Silvicultural Systems

Reflecting the fact that the MDNR manages a forest estate of almost 4 million acres spread throughout the northern half of the Lower Peninsula and the entirety of the Upper Peninsula and that is occupied by a wide variety of forest cover types, essentially all silvicultural systems applicable to the management of northern temperate forests are employed. For the northern hardwood types, where the desired species for management are relatively shade tolerant, selection silviculture is prevalently employed. Generally, this silvicultural approach relies upon natural regeneration.

In other forest types such as aspen and red-white-jack pine, even-aged silviculture is commonly employed. Throughout the Michigan state forest system, all three of the principal even-aged silvicultural systems are employed: clear cutting (with retention), seed tree and shelterwood. Both natural and artificial regeneration is relied upon with even-aged silviculture, depending upon site conditions and the species preferred for the next stand to be established after the regeneration harvest.

Harvesting methods include short-wood, tree length and whole-tree. The most common yarding method is ground-based using rubber-tired and tracked skidders. Harvesting is increasingly mechanized with a variety of machines such as processor-forwarders. Hand falling with chain saws still is employed under certain circumstances typically associated with selection harvests in northern hardwood types.

1.4.4 Management Systems

The State Forests are managed by the Michigan Department of Natural Resources (MDNR), a state agency comprised of six resource management divisions involved in the

administration of the State Forests:

- Forest, Mineral and Fire Management
- Wildlife
- Fisheries
- Land and Facilities
- Parks and Recreation
- Law Enforcement

As an agency within the executive branch of the state government, MDNR is accountable to the Natural Resources Commission, members of which are appointed by the Governor. Funding and oversight rests with the state legislature.

The State Forests are located throughout the northern LP and across the UP. In a complex array of field units that differ across resource management divisions, the state forests are organized into 15 Forest Management Units, 8 in the LP and 7 in the UP:

Lower Peninsula:

- Cadillac
- Gladwin
- Roscommon
- Grayling
- Traverse City
- Atlanta
- Gaylord
- Pigeon River Country

Upper Peninsula:

- Sault Ste. Marie
- Newberry
- Shingleton
- Escanaba
- Gwinn
- Crystal Falls
- Baraga

1.4.5 Monitoring System

Consistent with the nature of management planning on the Michigan state forests, there has not been a single, unified monitoring system. MDNR operates under many different plans and each has had different monitoring strategies. Under the Operations Inventory (OI) tactical project planning process, the frequency of compartment level monitoring is every ten years. Forest health specialists have a fairly rigorous monitoring program in place for subjects such as Beach Bark Disease, Emerald Ash Borer, Spruce budworm, etc. Wildlife Division has various monitoring routines from annual surveys (deer pellet counts, KW breeding bird surveys) to more periodic surveys for habitat availability. Specific watershed plans have monitoring requirements and surveys built into them, which meet their respective plans.

Chapter 5 of *Operational Management Guidance for State-Owned Forest Lands* provides a concise discussion of the management review and monitoring processes applied to the state forests, processes that augment the existing array of monitoring activities. With respect to management review activities, the Management Guidance document identifies:

- Internal operations audits of all 15 FMUs; after an initial internal audit of all 15 FMUs, each FMU will be audited thereafter on a 3-year cycle (5 FMUs internally audited per year)
- The Statewide Council (SWC) will conduct an annual management review to evaluate the results of the annual State Forest internal operations audits

If certified, the state forestland system will be subject to annual external surveillance audits by the certification bodies (FSC and SFI). It is our experience with other state forest management operations that these external audits will trigger additional internal monitoring activities by DNR in advance of and following the external audits.

With respect to additional, integrated monitoring activities, Chapter 5 of the Management Guidance document describes the intended monitoring foci at the FMU and eco-regional spatial scales, utilizing ecoregion-specific criteria and indicators (of which only the Eastern UP C&I have been developed, to date). Chapter 5 specifies the following elements of forest management that are intended to be monitored within the new, more integrated and comprehensive format:

- Yield of all forest products harvested
- Growth rates, yield, and condition of the forest
- Composition and observed changes in flora and fauna
- Environmental and social impacts of harvesting and other operations
- Cost, productivity and efficiency of forest management.

Additional guidance with respect to monitoring activities on the state forests is contained in the new Forest Certification Work Instructions, most notably: 1.6 Forest Management Unit Analysis and, 1.7 State Forest Timber Harvest Trends. Each Forest Certification Work Instruction also incorporates a monitoring component, many of which are tied to the Work Instruction 1.2 Management and Review.

1.4.6 Estimate of Maximum Sustainable Yield

Like many other state forestry agencies, the Michigan State Forest system uses a decentralized and “bottom up” area regulation-type of approach to setting harvest levels. While this approach does focus on area harvested per year, it cannot be considered a classical area control mechanism in which there is an express and systematic effort to establish a balanced age class distribution over a defined sustained yield unit through regular/annual regeneration harvests that establish new age class cohorts each period. This process relies upon general silvicultural guidelines for treatment decisions, but it is influenced by an array

of values, local conditions, and landscape concerns which are documented through the inventory and timber sale preparation processes.

Approximately 10% of the Michigan State Forest (or 390,000 acres) is inventoried and reviewed each year through compartment reviews, but less than 60,000 acres end up being prepared for commercial timber treatments. Over time, a detailed timber management system has evolved to establish annual plans of work and assess timber availability. This system updates an overview of the forest on an annual basis and includes the recording of stand-specific constraints (referred to as “limiting factors”) to timber harvests. The FMFM Management Team receives a summary report delineating by Forest Management Unit what is inventoried, how the acres fall within the various accounting categories; the Team then approves the means to treat prescribed acres. Subsequently, data on every stand which is prescribed for treatment is tracked.

Unlike traditional approaches to determining “allowable cut,” this approach is a “bottom-up” approach and assures that annual harvest targets are achievable and sustainable. In the view of the DNR, the practical applicability of maximum allowable cut estimates is often unclear; in contrast, the Michigan State Forest approach explicitly details factors which prevent harvesting stands while at the same time committing acres to be harvested.

Also, Michigan State Forest silvicultural guidelines are different from traditional silvicultural criteria which serve as point estimates for assessing an allowable cut. If stands meet the Michigan State Forest silvicultural guidelines but are not prescribed for treatment, then treatment limiting factors are required to be identified and coded. On the other hand, treatments may be prescribed before a stand reaches the silvicultural guidelines if there are no constraining factors and it is commercially desirable.

Rotation ages are ten to twenty years longer and basal area criteria ten to twenty square feet greater than are typical with industry lands in Michigan and the Lake States region. This is generally what would be expected of the management of a public forest versus an industrial forest given their different objectives and management mandates. Likewise, a narrow, timber-oriented estimate of maximum allowable cut would be substantially higher than the 55,000 acre level of current timber sales. However, such a higher estimate would not take into account the array of limiting factor data collected on the State Forest and its consistency over the past five-years. Based on age class data and additional work on limiting factors, DNR anticipates that timber harvests could be slightly higher in coming years, but this is not a given in light of public input, biodiversity concerns, greater recreation use, and co-management with the DNR Wildlife Division.

Assessing an appropriate, sustainable allowable cut has been bolstered by the FMU Analysis Work Instruction which brings more attention to the overall condition and trend of State Forest cover types at the outset of a new annual inventory cycle. Such factors as long-run age class balancing and forest health receive added emphasis, now.

1.4.7 Estimated, Current, and Projected Production

Annual Timber Production³

³ From: Michigan State Forest Timber Harvest Trends, Dr. Larry Pedersen, Sept. 16, 2005

Year	Acres Harvested	Volume Produced in Cords
200	56,385	735,637
2001	54,258	662,740
2002	57,800	755,635
2003	50,859	636,272
2004	48,251	713,730
2005 (projected)	52,434	NA

1.4.8 Chemical Pesticide Use

The primary use of chemicals on MI State Forests is vegetation control. Chemicals are used in conjunction with mechanical removal and prescribed fire. Chemical applications for vegetation control include:

- Treating exotic plant species (e.g., knapweed and thistle) that have invaded native grasslands
- Controlling vegetation along power lines
- Using herbicides to reduce competing vegetation

Other chemical pesticide applications that have been or may be used include:

- Stem injection to control Emerald Ash Borer
- Aerial spraying of biological control insecticide for Gypsy Moth
- Fish toxins to control non-native fish populations (deemed outside the scope of the assessment)

All pesticides used were reviewed by the auditors as to whether or not they are prohibited by FSC in the guidance document, “Chemical Pesticides in Certified Forests, Interpretation of FSC Principles and Criteria, July 2002”. The following pesticides are used by DNR:

Chemical name	Trade name
glyphosate	various
Imazapyr**	Arsenal
chlorothalonil	Bravo
Captan	Captan
Diflubenzuron**	Dimilin
metsulfuron-methyl	Escort
Triclopyr	Garlon
oxyflourfen*	Goal
Diuron**	Karmex
imidclopid	
simazine*	Various
Picloram	Tordon
2,4-D**	Various
BT	Various
Clopyralid	Transline
thiram	Thiram

sulfometuron methyl	Oust
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* indicates that the chemical appears on the FSC 2002 Prohibited list, and MI DNR ceased all use of the chemical prior to award of certification.

** indicates that the chemical was added to the FSC Prohibited list in August 2005, and a temporary derogation has been granted until 12/31/2006.

Recent additional DNR policy guidance on chemical use on the state forests is provided in the new Forest Certification Work Instruction, 2.2: Use of Pesticides and Other Chemicals on State Forest Lands.

1.5 SLIMF Qualifications

The state forestlands of Michigan do not qualify either as small or low intensity, per FSC guidelines. As such, the standard evaluation protocols were employed in this project.

2.0 GUIDELINES/STANDARDS EMPLOYED

This certification evaluation was conducted against the FSC Lake States Regional Standard which is available on the FSC-US web site, at: www.fscus.org.

3.0 THE CERTIFICATION ASSESSMENT PROCESS

3.1 Assessment Dates

Scoping Visit:

The Scoping Visit was conducted October 25-29, 2004. The draft Scoping Visit report was submitted to MDNR in late November, 2004, and finalized on December 17, 2004. The Scoping Visit Team Leader, Dr. Robert Hrubes made a presentation of the Scoping Visit findings in Lansing, MI, in early December, 2004.

Certification Audit:

3.2 Assessment Team

The audit team for this certification evaluation was comprised of four natural resource professionals, three of which conducted the 2004 Scoping Visit.

Dr. Robert J. Hrubes, Team Leader:

Dr. Hrubes is a California registered professional forester (#2228) and forest economist with over 30 years of professional experience in both private and public forest management issues. He is presently Senior Vice-President of Scientific Certification Systems. In addition to serving as team leader for the Michigan state forestlands evaluation, Dr. Hrubes worked in collaboration with other SCS personnel to develop the programmatic protocol that guides all SCS Forest Conservation Program evaluations. Dr. Hrubes has previously led numerous

audits under the SCS Forest Conservation Program of North American public forest, industrial forest ownerships and non-industrial forests, as well as operations in Scandinavia, Chile, Japan, Malaysia, Australia and New Zealand. As the Michigan State Forests evaluation team leader, Dr. Hrubes is the principal author of this report, in collaboration with co-authors, Dr. Capen, Jodi Kaiser and Mike Ferrucci. Dr. Hrubes holds graduate degrees in forest economics (Ph.D.), economics (M.A.) and resource systems management (M.S.) from the University of California-Berkeley and the University of Michigan. His professional forestry degree (B.S.F. with double major in Outdoor Recreation) was awarded from Iowa State University. He was employed for 14 years, in a variety of positions ranging from research forester to operations research analyst to planning team leader, by the USDA Forest Service. Upon leaving federal service, he entered private consulting from 1988 to 2000. He has been Senior V.P. at SCS since February, 2000.

Dr. David Capen, Team Member (Wildlife Biology and Ecology):

Dr. Capen is Research Professor, Rubenstein School of Environment and Natural Resources, University of Vermont. His research experiences and expertise are in the areas of wildlife habitat analysis, avian ecology, landscape ecology, biodiversity analysis, GIS and remote sensing, multivariate statistics, and conservation planning and reserve design. He holds the following degrees: B.S.F., University of Tennessee, 1969 (Forestry); M.S., University of Maine, 1972 (Wildlife Management); and Ph.D., Utah State University, 1977 (Wildlife Science). Dr. Capen has participated in a variety of forest certification projects, including SFI and FSC projects on public lands in Massachusetts, Maine, and Minnesota, and private forest lands in Maine and New York.

Mr. Michael Ferrucci, Team Member (Forest Management and Silviculture):

Michael Ferrucci is a founding partner and President of Interforest, LLC, and a partner in Ferrucci & Walicki, LLC, a land management company that has served private landowners in southern New England for 17 years. Its clients include private citizens, land trusts, municipalities, corporations, private water companies, and non-profit organizations. He has a B.Sc. degree in forestry from the University of Maine and a Master of Forestry degree from the Yale School of Forestry and Environmental Studies. Mr. Ferrucci's primary expertise is in management of watershed forests to provide timber, drinking water, and the protection of other values; in forest inventory and timber appraisal; hardwood forest silviculture and marketing; and the ecology and silviculture of natural forests of the eastern United States. He also lectures on private sector forestry, leadership, and forest resource management at the Yale School of Forestry and Environmental Studies.

For this project, Mr. Ferrucci functioned as an employee of NSF.

Ms. Jodi Kaiser, Team Member (Forest Management and Wildlife Management):

Ms. Jodi Kaiser brings the strengths of a diversified background having education and experience in both forestry and wildlife management in the state of Michigan. She is a consulting forester from Saint Ignace, MI. Ms. Kaiser has worked as Executive Director of the Michigan Forest Resource Alliance, as Forest Policy Specialist with the Michigan United Conservation Clubs and as a procurement forester for Rothig Forest Products, Inc.

Ms. Kaiser holds the following Degrees:

Michigan Technological University; BS 1994 (Forestry)

Michigan Technological University; MS 1994 (Forestry with Wildlife Emphasis)

3.2.1 Peer Reviewers

The draft version of this report was submitted for peer review by the following experts:

Larry Leefers, Ph.D., Associate Professor, Forest Economics and Planning, Michigan State University

Jon Haufler, Ph.D., Executive Director, Ecosystem Management Research Institute.

Peer review comments were duly considered by the report authors in the finalization of the report.

3.3 Assessment Process

3.3.1 Itinerary

The following activities comprised the field phase of the full certification evaluation:

Sept. 18: Audit team convenes in Lansing; final instructions to team members

Sept. 19: Opening meeting, staff interviews and stakeholder meeting #1 in Lansing

Sept. 20: Cadillac OSC and FMU; office discussions and field visits

Sept. 21: Gladwin FMU; office discussions and field visits

Sept. 22: Gaylord OSC and FMU; office discussions, field visits and stakeholder meeting #2

Sept. 23: Atlanta FMU; office discussions and field visits

Sept. 24: Pigeon River Country FMU; office discussions and field visits

Sept. 25: Document review

Sept. 26: Newberry OSC and Sault Saint Marie FMU; office discussions and field visits

Sept. 27: Marquette OSC and Gwinn FMU; office discussions, field visits and stakeholder meeting #3

Sept. 28: Baraga FMU; office discussions and field visits

Sept. 29: Audit team deliberations in Marquette

Sept. 30: Audit team deliberations and exit meeting in Marquette

3.3.2 Evaluation of Management System

The process by which Scientific Certification Systems evaluated the systems employed by MDNR in managing the state forests entailed the following components:

- Empanelment of an interdisciplinary team with demonstrated credentials and expertise in forest certification, auditing protocols, forest management, wildlife management as well as a working knowledge of the forest types found on the Michigan state forests and a general familiarity with the Michigan DNR
- Review of documents pertinent to the state forests, as are available on the DNR intra-

- net site as well as that were provided, electronically, to the audit team members
- Extensive interviews with a broad cross-section of DNR personnel at the head office in Lansing, four OSCs (Operations Service Centers) and 8 FMUs (FMFM forest management units)
 - Field reconnaissance of a broad array of forest conditions and past and present management activities on the 8 FMUs that comprised the sample for the full evaluation

3.3.3 Selection of FMU's to Evaluate

The forest management operation undergoing certification consists of a single Forest Management Unit in the FSC meaning of that term. However, that same term is used in the MDNR context, as well, to connote the basic field units by which the 3.9 million acres of state forestlands are organized. As presently organized, there are 15 FMUs comprising the Michigan state forestlands.

For the 2005 full certification evaluation, the audit team visited the 8 MDNR FMUs that were not visited during the 2004 Scoping Visit, thus assuring a 100% sample intensity over the two major field reconnaissance audits done prior to rendering the certification decision.

3.3.4 Sites Visited

See the daily itinerary in Section 3.3.1 for the FMUs that comprised the sample-based field work underpinning this certification evaluation. At each of the 8 FMUs visited during this evaluation, the audit team visited a number of field sites, selected by the audit team and intended to provide the team with exposure to the full range of forest management activities, forest cover types, silvicultural and harvesting systems, etc. On most days, the audit team members split up into 2-4 sub-groups in order to achieve greater geographic coverage. At all times, the auditors requested that pertinent documentation associated with the selected sites was made available to the auditors. In addition to site-specific documents, MDNR supplied the audit team with an extensive array of supporting documentation such as resource-specific planning documents.

3.3.5 Stakeholder Consultation

Pursuant to SCS and FSC protocols, consultation with a broad cross-section of stakeholders was an integral component of the evaluation process, both during the Scoping Visit in 2004 and the Full Evaluation in 2005. Consultation took place prior to, concurrent with, and following the field evaluation. The following were distinct purposes to the consultations undertaken by the audit team:

- To solicit input from affected parties as to the strengths and weaknesses of Michigan DNR's management of the state forestlands, relative to the FSC Lake States Regional Standard, and the nature of the interactions between MDNR and the surrounding communities, "of place" and "of interest."

- To solicit input on whether the DNR has consulted with stakeholders regarding identifying any high conservation value forests.

Principal stakeholder groups of relevance to this evaluation were identified based upon results from the Scoping Visit, lists of stakeholders provided by MDNR, and additional stakeholder contacts from other sources (e.g., chair of the regional FSC working group). The following types of groups and individuals were determined to be principal stakeholders:

- MDNR employees, including headquarters and field personnel
- Contractors
- Lease/easement holders
- Adjacent property owners
- Pertinent tribal representatives
- Members of the FSC Lake States Working Group that developed the regional standard (the working group has been disbanded since completion of the standard)
- FSC International
- Local and regionally-based environmental organizations and conservationists
- Local and regionally-based recreation user groups
- Local and regionally-based social interest organizations
- Forest industry groups and organizations
- Purchasers of Michigan state forestland timber sales
- Local jurisdictional bodies such as County Boards of Commissioners
- Local, State and Federal regulatory agency personnel

The following stakeholder consultation activities were undertaken during the 2004 Scoping Visit and the 2005 Full Evaluation:

- A two-hour set of focused stakeholder meetings were held in the DNR headquarters office during the Scoping Visit; approximately 10 individuals representing a full range of interests met with the co-team leaders, offered input and received briefings on the process.
- A public notice to several hundred stakeholders was distributed through direct surface mail, email, and web-based announcements. The public notice, issued 30 days in advance, announced the timing of the field component of full evaluation; the notice solicited comments and informed interested parties as to the availability of the FSC dispute resolution process; the public notice also solicited comment on matters related to FSC Principle 9, High Conservation Value Forests; finally the public notice announced the date, time and location of three public meetings that were scheduled to be held during the full evaluation.
- During the 2-week field component of the full evaluation, the audit team held three open invitation and widely-noticed public meetings in Lansing, Gaylord and Marquette. Each meeting attracted between 10 and 25 individuals. The afternoon meeting in Lansing lasted for approximately 90 minutes and the two evening meetings, in Gaylord and Marquette, each lasted approximately 2 hours.
- The audit team received and considered written comments submitted by a broad

cross-section of stakeholder groups; most comments were submitted during the 2 weeks that the audit team was in Michigan but a few comments were received prior to and after the field work.

- At the request of one stakeholder very active in DNR management of the state forests, the audit team leader spent half a day meeting with this individual in the field, reviewing issues of concern

3.3.5.1 Summary of Stakeholder Concerns and Perspectives and Responses from the Team Where Applicable

A summary of the comments on the standard (where applicable) and major perspectives and concerns expressed by the stakeholders that were consulted during the course of this evaluation include:

Economic Concerns

Comment/Concern	Response
<ul style="list-style-type: none"> • Prohibition on the use of certain chemicals creates a problem for controlling vegetation within gas and power line easements 	DNR must comply with the FSC chemical use policy that prohibits certain chemicals
<ul style="list-style-type: none"> • Michigan’s unharvested AAC surplus is the greatest in the Lake States; current harvest levels are too low 	FSC standards do not mandate minimum harvest levels in order to achieve certification; harvest levels should be set at levels that balance economic, environmental and social considerations in a manner that demonstrates conformance to the FSC Lake States Regional Standard
<ul style="list-style-type: none"> • There are enough lands already set aside from commercial timber management 	Comment noted; DNR’s management of the state forests must comply FSC Criterion 6.4 as well as FSC Principle 9
<ul style="list-style-type: none"> • Recreational use of the state forests is important to the regional economies of the northern LP and the UP 	Comment noted
<ul style="list-style-type: none"> • Too few acres are scheduled for harvest treatments, as a percentage of total acres examined each year 	DNR is actively assessing “factor limitations” as part of its ongoing obligation to balance conflicting management consideration

Social Concerns

Comment/Concern	Response
<ul style="list-style-type: none"> • Most ATV/ORV users are responsible but there are a few “bad apples” 	Comment noted; see CAR 2005.2
<ul style="list-style-type: none"> • Support for dual FSC/SFI certification 	Comment noted

<ul style="list-style-type: none"> Inadequate public exposure to and consultation on the new Work Instructions 	See REC 2005.2
<ul style="list-style-type: none"> There is a disconnect between Work Instructions and compartment reviews 	If certification is awarded, this will be a subject addressed during surveillance audits.
<ul style="list-style-type: none"> The Work Instructions look good on paper, but is it just talk? 	Comment noted; DNR has instituted an internal audit process for assessing conformance to the Work Instructions; as well, DNR undertook an intensive training program during the summer of 2005 to make sure that all field personnel have a working knowledge of the Work Instructions; conformance to the WIs will be a significant focus on certification surveillance audits, were certification to be awarded
<ul style="list-style-type: none"> Snowmobile trails are an important resource and half of the state's total are on state forestland 	Comment noted
<ul style="list-style-type: none"> Concern that forest certification will amount to more red tape that further reduces timber harvest levels; there are too many restrictions on timber management; "factor limits" are too excessive; more than enough land as been set aside 	Comment noted; see similar comments, above
<ul style="list-style-type: none"> FSC should encourage multiple use management 	The FSC Lake States Regional Standards expressly encourage management for a diversity of outputs and services
<ul style="list-style-type: none"> DNR is overstepping its authorities with respect to logger safety; contractors shouldn't be responsible for sub-contractors 	Comment noted; the FSC standards require that all woods workers and their employers meet legal health and safety requirements
<ul style="list-style-type: none"> The oversight function associated with certification will be a positive addition to state forestland management 	Comment noted; if certification is awarded, MDNR must undergo annual surveillance audits
<ul style="list-style-type: none"> DNR is inflexible and won't listen to suggestions for change 	Comment noted; see REC 2005.2
<ul style="list-style-type: none"> Generally, the DNR is not providing sufficient opportunities for public input 	Comment noted; see REC 2005.2
<ul style="list-style-type: none"> DNR needs to do more in actively engaging the public 	Comment noted; see REC 2005.2

Environmental Concerns

Comment/Concern	Response
<ul style="list-style-type: none"> Biodiversity objectives must be integral to management of the state forestlands 	See CARS 2005.5, 2005.6, 2005.7, 2005.8
<ul style="list-style-type: none"> What are the biodiversity objectives for “matrix lands” (lands not designated as special conservation areas)? 	See CAR 2005.9
<ul style="list-style-type: none"> A concern over the fact that there have been no new designations to the Natural Areas Program for many years; what is the status of the program? 	See CAR 2005.8
<ul style="list-style-type: none"> Concerns over a “disconnect” between state forestland plans and actions 	See CARs 2005.9, 2005.10
<ul style="list-style-type: none"> DNR has not been funding contracts with MNFI for field survey work 	See CAR 2005.5(a)
<ul style="list-style-type: none"> There has been no public review of the recently designated areas of high conservation value 	See Major CAR 2005.13 The first iteration of HCVF nominations were areas that had already undergone a public consultation process; all future designations will include opportunities for public nominations and input, per the new HCVF Work Instruction
<ul style="list-style-type: none"> Past inconsistencies in the approach to “potential old growth” 	Comment noted; POG is now supplanted by the HCVF and eco-regional planning processes, both of which are subject to CARs and to annual surveillance audits
<ul style="list-style-type: none"> DNR is falling short of the FSC certification standards; a delay in the certification process is desired 	Comment noted
<ul style="list-style-type: none"> There are numerous ORV-related problems and BMP violations 	See CAR 2005.2
<ul style="list-style-type: none"> The Work Instructions were not distributed for public review and comment prior to being finalized 	See REC 2005.2

3.3.6 Other Assessment Techniques

Of note, the audit team held three public meetings (in Lansing, Gaylord and Marquette) in order to provide ample opportunity for stakeholders to meet with the auditors, provide input, and learn more about the certification process.

3.4 Total Time Spent on Audit

Approximately 15 auditor days of field time were spent on the Scoping Visit in 2004 along with approximately 5 auditor days for report writing.

For the full evaluation in 2005, approximately 44 auditor days were expended in field work, 4 auditor days in document review prior to the field work and 10 auditor days in writing the draft report.

3.5 Process of Determining Conformance and Award of Certification

For scoring purposes, and consistent with SCS Forest Conservation Program evaluation protocols⁴, the team employed weights of relative importance to the Criteria within each of the first nine Principles⁵. These weights were previously developed by SCS personnel for use in the Lake States Region and have been or are being used on state lands projects in Wisconsin and Minnesota in addition to this Michigan project. The weights are needed in order to construct a weighted average score for each FSC Principle as under the accredited SCS protocols, the decision rule for award of certification requires adequate overall conformance with each of the applicable Principles. A review of the Criteria comprising Principle 9 provides a clear example as to why a simple arithmetic averaging of the criterion-level scores is inappropriate. The scope and depth of the 10 Criteria in Principle 9 vary to a marked degree such that their relative importance in ascertaining overall performance at the Principle level is clearly not equal. For instance, Criterion 6.3 addresses ecological integrity and is elaborated through three sub-criteria and a total of 13 regional indicators. In contrast, Criterion 6.8 is narrowly focused on the use of exotic species and has but one regional indicator. The premise of the SCS assessment protocols is that these two Criteria should not have equal influence on the final certification decision.

Performance scores were assigned on a consensus basis by the audit team members to each Criterion at the completion of the field phase and importance-weighted means (average scores) were calculated for each Principle. Performance scoring is based upon an express assessment of conformance to each of the regional indicators associated with each of the Criteria. Performance scoring takes place on a 100-point scale, with 100 points representing perfect/ideal conformance to the applicable Criterion, based upon conformance with the indicators subsumed under the Criterion. Scores between 80 and 100 represent performance at varying levels of adequate to superlative conformance to the applicable Criterion. Scores less than 80 points connote performance in which there is discernible non-conformance to the breadth of a Criterion. During the group consensus/synthesis deliberation undertaken immediately after the final day of field reconnaissance and information collection, and with the facilitation of the lead auditor, the following qualitative scoring guides were employed by the audit team to arrive at numerical scores for each FSC Criterion:

⁴ More detail about the certification protocols can be found in the SCS Forest Conservation Program Certification Manual available on the SCS web site (www.scs-certified.com).

⁵ As discussed later in this report, the 10th Principle was determined to be non-applicable to the evaluation of the Michigan State Forests.

Performance scoring of the applicable⁶ Criteria is a time intensive exercise and needs to adhere to the following guidelines to facilitate the process and maintain consistency:

In team deliberation, first assess if the subject operation is in compliance with a given criterion. The decision should be based on the observed performance against the indicators found within that criterion. A criterion score of 80 points or higher is assigned if performance is considered to be in compliance.

Next, deliberate on how much the observed performance is above or below the threshold (as defined by the indicators) using the following:

"**Marginally**" above or below, the score will be within 5 points of 80.

"**Clearly**" above or below, the score will be within the next 5-point bands.

"**Superlative**" relative to the indicators, the score will be in the 90's. In order to recognize and encourage the concept of continuous improvement, rarely is a score above 95 awarded.

Conversely, if the performance is judged to be "**highly deficient**" relative to the indicators, the score will be in the 60's.

In assigning performance scores, the audit team members consider the array of information collected during the field reconnaissance, document review and personal interviews. That is, the team members call upon extensive notes and records generated during the information gathering phases of the process. But given the complexity of the subject matter and the certification standard, a key component of the scoring process is team discussion and consensus generation.

For any Criterion for which the team assigns a score below 80 points, the team is required to specify one or more Corrective Action Requests (CARs). If the weighted average score of any Principle is less than 80, certification cannot be awarded and, instead, the evaluation team must stipulate one or more Major Corrective Action Requests (Major CARs) The evaluation team also retains the option to specify "discretionary CARs" even when the score for the pertinent Criterion is above 80 points. This may occur when, overall, the Criterion was highly scored but there are issues within the scope of a Criterion where important improvements are, in the judgment of the team, necessary even though these deficiencies are not severe enough to move the score below 80 for the totality of the Criterion. For certification to be awarded, the importance-weighted average score for each of the applicable FSC Principles must be 80 points or higher.

Note: In January 2005, a new FSC accreditation standard (in which are stated the mandatory certification rules that accredited certifiers must employ when conducting FSC-recognized certification evaluations) was promulgated. Under the new accreditation standard, award of a FSC-endorsed forest management certificate requires conformance with all applicable Criteria rather than overall compliance with the applicable Principles. That is, non-conformance with any Criterion mandates a Major Corrective Action Request. However, in April 2005, the FSC Accreditation Business Unit issued a guidance document in which it

⁶ Criteria 3.1 and 3.4 and all Criteria in Principle 10 were deemed not applicable to the evaluation of the Mich

authorized use of the prior certification decision rule in geographic areas covered by a duly approved FSC regional standard, *provided that the regional standard was expressly developed with the old decision rule in mind*. As has been confirmed in writing by the FSC US National Initiative, all regional standards developed thus far in the U.S. were developed with the old decision rule in mind and, as such, SCS is authorized to employ its standard decision protocol, described above.

Interpretations of Major CARs, CARs and Recommendations

Major CARs: These are corrective action requests that must be resolved or closed out prior to award of the certificate. These arise when the importance-weighted average score for a Principle is less than 80 points or where there is observed non-compliance with a “pre-emptive” indicator (e.g., use of GMOs is a “fatal flaw” that precludes award of certification regardless of the strength of the overall management program).

CARs: Corrective action requests that must be closed out within a specified time period after award of certification. Certification is contingent on the certified operation’s response to the CARs within the stipulated time frames. Depending upon case-specific circumstances, failure to close out a CAR within the specified time frame can lead to possible elevation of the CAR to status as a Major CAR with a very short compliance date upon which continued certification is contingent. In other circumstances, extension of the time frame for complying with a CAR may be granted.

Recommendations (RECs): These are suggestions that the audit team concludes would help the forest management entity move even further towards exemplary status. Action on the recommendations is voluntary and does not affect the maintenance of the certificate.

4.0 RESULTS OF THE EVALUATION

Table 4.1 below, contains the evaluation team's findings as to the strengths and weaknesses of the subject forest management operation relative to the FSC Principles of forest stewardship. The table also presents the corrective action request (car) numbers related to each principle.

Table 4.1 Notable strengths and weaknesses of the forest management enterprise relative to the P&C

Principle/Subject Area	Strengths Relative to the Standard	Weaknesses Relative to the Standard	CAR/REC #s
P1: FSC Commitment and Legal Compliance	<ul style="list-style-type: none"> ▪ Adequate conformance with applicable laws, rules, and regulations was observed. Development and implementation of the new Work Instructions will result in a substantial improvement in overall conformance. ▪ Payments in lieu of taxes (PILT) have been delayed in recent years, but local jurisdictions are receiving full payment. ▪ MDNR personnel have devoted considerable effort to understand and assess the standards of certification, and have demonstrated a commitment to the principles. 	<ul style="list-style-type: none"> ▪ Although some stakeholders believe that DNR could be more forthright in sharing information, it is our sense that DNR is complying with applicable statutes and regulations pertaining to public information. ▪ Management/control of unauthorized use of the state forests, particularly unauthorized ATV/ORV use is a high priority. But, budget reductions have resulted in reduced staff positions allocated to public use management, and there is a level of unauthorized use that ranges from moderate to severe. More resources need to be devoted to this growing management challenge. ▪ MDNR was unable to provide the auditors with a concise/compiled register of all applicable international agreements and the salient obligations. ▪ Pending state legislation, if enacted, could put DNR in a difficult situation with respect to ongoing conformance with Criterion 1.6 as well as other criteria such as C5.6 and all of P6. This legislation would mandate harvest levels on the state forests and mandate that all stands reviewed as part of the YOE/OI process must be scheduled for harvest, thereby overriding the “limiting factor” analyses presently being conducted. 	<p><u>CARs</u></p> <p>2005.1 2005.2</p> <p><u>RECs</u></p> <p>2005.1</p>

P2: Tenure & Use Rights & Responsibilities	<ul style="list-style-type: none"> ▪ All legal use rights on the state forests are properly recognized and documented. DNR has the statutory authority to manage the subject forest estate, which is unquestionably owned by and for the benefit of the citizens of Michigan. Timber sale boundaries are clearly marked with paint prior to commencement of site disturbing operations. ▪ DNR maintains active dialogue, through multiple mechanisms, with all stakeholders that express an interest in the affairs of state forestland management, and has, over the past year, begun to put more effort into dialogue and consultation with federally recognized tribes. ▪ Issues of customary upland use by Michigan tribes of the state land are presently being adjudicated in the courts—a matter of interpretation of initial treaty rights. DNR is pursuing resolution in an appropriate manner. 	<ul style="list-style-type: none"> ▪ ATV/ORV use is causing resource damage and better control is needed. ▪ DNR has recently informed power corridor easement holders that certain herbicides can no longer be used; this has caused some concern with those easement holders and DNR will need to continue to dialogue with those individuals in order to settle the matter. 	
P3: Indigenous Peoples' Rights	<ul style="list-style-type: none"> ▪ A senior DNR position is devoted, largely, to maintaining interactions with tribal representatives, and DNR has ramped up its efforts at interacting with the Michigan tribes. ▪ At the compartment review/operations inventory planning level, SHPO is consulted. 	<ul style="list-style-type: none"> ▪ DNR personnel could be more affirmative in actively looking for new cultural resources rather than merely determining if already recorded sites exist with the planned areas of operation. 	<u>CARs</u> 2005.3 2005.4 <u>RECs</u> 2005.2 2005.3

<p>P4: Community Relations & Workers' Rights</p>	<ul style="list-style-type: none"> ▪ With respect to contracting, DNR employs a competitive bidding system that does not discriminate against non-local bidders and, in fact, implicitly favors local bidders due to lower transport costs. Contract specifications include a new requirement that contractors comply with all applicable laws and regulations, including labor laws. Also, DNR has increased the emphasis on safety programs and procedures, in cooperation with its contractors. ▪ Although employment opportunities and employee benefits have eroded somewhat in recent years, DNR positions still represent a quality employment opportunity with superb job security. Non-supervisory DNR employees are unionized. Standard contract language includes a requirement of compliance with all applicable laws of Michigan, including the right to organize. ▪ A wide array of efforts at public education about forestry and forestry practices exist; DNR actively collaborates with MSU and other academic institutions on research, extension and public education. ▪ DNR and its workforce is a very positive component of the rural communities and economies surrounding the state forests. ▪ DNR has an array of standing committees and other mechanisms by which it is possible for citizen stakeholders to provide input into the management of the state forests. On the DNR web site, there is a link to a document: "Managing Michigan's State Forests: Your Guide to Participation" 	<ul style="list-style-type: none"> ▪ Many DNR employees are involuntarily "banking" 4 hours per pay period. ▪ there is not sufficient direction to field staff for assuring identification of archeological/cultural/historic sites of importance and there is no established guidance for assuring that any such sites found during field work are properly reported to the State Historic Preservation Office/Officer (SHPO) ▪ There is an effective mechanism for stakeholder input at the compartment level, and eco-regional planning should afford similar opportunities at the large scale. But at a mid-spatial scale, such as at the level of examining management options for the mesic conifers, DNR has not developed suitable protocols for public dialogue. 	<p><u>CARs</u></p> <p>2005.4</p> <p><u>RECs</u></p> <p>2005.4</p>
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<p>P5: Benefits from the Forest</p>	<ul style="list-style-type: none"> ▪ DNR is a long-term manager of this forest estate; the collective investment in planning, inventory, resource protection and management operations is extensive and strongly indicative of a long-term commitment. ▪ Timber harvests on the state forests are not subject to significant short-term fluctuations due to financial exigencies; harvest levels do not exceed planned levels. ▪ Although DNR does not have explicit policies that favor local processing and manufacturing, DNR employs a competitive bidding system that implicitly favors local bidders with lower transportation costs. Most wood is purchased by locally- based contractors who, in turn, sell the harvested logs to processing facilities within Michigan or northern Wisconsin. ▪ Wood harvested from the state forests appears to find its way to the highest-value uses. ▪ DNR clearly is responding to its perceived mandate to manage for the full suite of services and resources rather than merely managing to maximize revenue generation, for instance. ▪ Average annual harvest levels on the Michigan state forests are below average annual growth; harvests are set at levels that reflect an appropriate balancing of a suite of competing uses. 	<ul style="list-style-type: none"> ▪ While overall investment in the administration of the state forests is considerable, the growing demands on public use management are now exceeding the current commitment of resources (people, budgets). ▪ There are numerous unfilled/vacant positions in each of the departments resource management divisions (FMFM, Wildlife, Fisheries) 	<p><u>RECs</u></p> <p>2005.5 2005.6 2005.7</p>
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<p>P6: Environmental Impact</p>	<ul style="list-style-type: none"> ▪ Foresters and wildlife biologists are generally aware of disturbance regimes and successional pathways, commonly employing the Kotar classification to assess site potential, and using circa 1800 land survey maps to reference historical conditions. Compartment review process requires involvement of foresters, wildlife biologists, fisheries biologists and reviews by MNFI, MDEQ, and SHPO to assess short-term environmental impacts. ▪ Numerous surveys are conducted to monitor populations of threatened or rare wildlife species. DNR contracts with MNFI to conduct surveys for other species. Wildlife Conservation Strategy (now called Wildlife Action Plan) provides guidance for monitoring of a long list of species of greatest conservation need.. Part 525 of Act 451 stipulates that management shall address stand- and landscape-level measures that promote conservation of forest plants and animals ▪ Retention of biological legacies during forest harvesting is one strategy that is addressed in various guidelines and practiced in many instances. ▪ A substantial network of Natural Areas exists on state forest lands, and off site (USFS, TNC, various lands trusts). The Biodiversity Conservation Planning Process (adopted June 2005) has outlined and initiated a suitable management planning process. ▪ Guidelines to prevent erosion and minimize damage during harvesting are well understood by field personnel and by contractors. Personnel in Fisheries Division and DEQ contribute to BMP conformance. Timber sale contracts contain specifications for minimizing damage to residual trees, regeneration, and soils. A visual management checklist is to be used on all timber sales. ▪ Pesticides are used sparingly and only after written prescriptions are approved. More commonly, IPM procedures are evident. Numerous policies and directives recommend prescribed burns to mimic natural disturbances, planting species appropriate to site conditions, and planting with seed collected from nearby sources. Forest health specialists are available to assist with management planning and compartment reviews. ▪ Chemicals, including fuel and oil, are stored properly; clean-up kits are routinely found in vehicles; and guidelines for proper use and disposal of such contaminants are included in timber sale contracts. ▪ Biological control agents have been used on state forest lands for control or experimental control of gypsy moths, spotted knapweed, and purple loosestrife, but close review and supervision is provided. No GMOs have been used by DNR. Exotic tree species are not being planted, and the few plantations of Scotch pine are being converted to native species. Native grasses are seeded when correcting or preventing erosion. Efforts are being made to control invasive exotic species. ▪ Conversions of forest to non-forest use are minimal, although some conversion is for the desirable purpose of creating wildlife openings. 	<ul style="list-style-type: none"> ▪ Eco-regional management plans do not exist for most of the state forest lands, thus there is inadequate landscape-level assessment of past and desired future conditions of the forest. Eco-regional planning efforts have progressed slowly in recent years. There is a need for more extensive assessment of rare species and communities, within compartments and across forest management units. ▪ Resources for field assessments of rare or threatened species, especially plants, appear to have declined in recent years. (1) ▪ Existing plans and guidelines incorporate analyses of landscape pattern, disturbance regimes, and site conditions, but such analysis and guidance does not exist for entire districts, nor for the entire system of state forest lands. ▪ Goals for distribution of age classes, successional stages, and community types are being met rather well, but in an ad hoc manner based on a patchwork of plans, guidelines, and compartment exams. In some areas, high deer populations threaten regeneration of endemic species. ▪ Practices of leaving “character” trees in thinning and selection harvests, islands of representative trees in clearcuts, and a variety of trees to represent structural and genetic diversity are not consistent. ▪ Policies exist for salvage harvesting, with review required by wildlife biologists, but no guidance by regional plans or landscape-level objectives. ▪ Size and configuration of the Natural Area network has not been sufficiently evaluated against the criterion of representativeness. ▪ Although existing roads generally are maintained in adequate condition, and numerous policies address the ecological impacts of roads, the system of roads on state forest lands is not adequately planned and designed. A new system is in place for reporting failed or flawed structures and instances of erosion, but funding for maintenance of roads and bridges has deteriorated in recent years, threatening adequate maintenance. 	<p><u>CARs</u> 2005.5 2005.6 2005.7 2005.8</p> <p><u>RECs</u> 2005.8 2005.9 2005.10 2005.11</p>
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P7: Management Plan	<ul style="list-style-type: none"> ▪ Planning processes exist at multiple spatial and temporal scales with the most developed being at the compartment level. ▪ T&E species, their habitats and DNR management approaches are the subject of extensive planning processes and documents. ▪ Quite clearly, silvicultural prescriptions employed on the state forests represent an integration of ecological, economic and social considerations; DNR is not engaged in maximum or optimum timber production at the expense of non-timber considerations. ▪ Even in the absence of completed eco-regional plans, there are landscape-level considerations incorporated into management actions and programs. ▪ There are extensive environmental safeguards that are incorporated into the DNR management system, such as the statewide BMPs that DNR treats as mandatory guidance. ▪ Both even and uneven-aged silvicultural systems are employed on the state forests with uneven-aged prescriptions being most prevalent on all forest types other than aspen and red pine planted stands. Silvicultural prescriptions result from an explicit consideration of pre-harvest stand conditions and desired future conditions. ▪ As can be found on the DNR web site and in numerous publicly available documents produced by DNR, the historical use patterns on the land that now comprises the state forests is well understood and documented. The history of past resource exploitation clearly is a factor in the formulation of modern management policies and objectives for the state forests. ▪ The entire body of planning documents is publicly available; extensive information and data is available on the department web site: (http://www.midnr.com/publications/pdfs/divisions/forest/ForestCertification/MyWebsFC/StatewidePlanning.htm.) 	<ul style="list-style-type: none"> ▪ Eco-regional plans have suffered from mis-starts and changing direction from headquarters but, with the new Work Instructions, now appears to be on track for completion within the next two years. ▪ Overall, there is inadequate conformance to the requirement to incorporate landscape level considerations in the multi-faceted DNR planning process. It is critical that DNR complete the eco-regional plans at the earliest practicable time. See the corrective action request, below. ▪ The auditors are unable to find a guidance document that clearly sets forth the frequency/periodicity by which key planning processes will be reviewed and updated. The pace of completion of the eco-regional plans is clearly not compatible with the expectation of this indicator—that operational plan components are kept current. Strategic planning simply has not been a sufficient priority for the DNR, which instead has relied too much on operational planning through the compartment review/operations inventory process. ▪ Non-timber forest products do not receive much attention in the planning process ▪ DNR is deficient with respect to maintaining the currency of operational planning components, particularly at scales above the stand level (which are adequately addressed through the 10-year cycle of year-of-entry management that defines the compartment review process. ▪ The extent and complexity of the body of planning documents represents a considerable challenge to interested stakeholders in terms of trying to understand how they all fit together into a cohesive whole and how to extract specific information of interest. 	<u>CARs</u> 2005.9 2005.10 2005.11
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<p>P8: Monitoring & Assessment</p>	<ul style="list-style-type: none"> ● Chapter 5 of <i>Operational Management Guidance for State-Owned Forest Lands</i> provides a concise discussion of monitoring processes applied to the state forests ● MDNR operates under many different plans and each has different monitoring strategies. Under OI, frequency is every ten years. Forest health specialists have a fairly rigorous monitoring program in place for subjects such as Beach Bark Disease, Emerald Ash Borer, Spruce budworm, etc. Wildlife Division has various monitoring routines from annual surveys (deer pellet counts, KW breeding bird surveys) to more periodic surveys for habitat availability. Specific watershed plans have monitoring requirements and surveys built into them, which meet their respective plans. ● An array of formal and informal mechanisms exist assuring that environmental effects of site-disturbing activities are understood. ● Generally the MDNR does a good job through OI and under the new IFMAP system in demonstrating conformance to the inventory requirements found in FSC Indicator 8.2.b.1. ● BMP non-compliance reporting and lists were reviewed and are in place. ● MDNR forest managers incorporate adaptive approaches that build upon observed effects of past management activities; this is functioning most effectively at the compartment level. 	<ul style="list-style-type: none"> ● Monitoring of social effects of management activities does not presently rise to a level of adequate conformance to the standard. ● DNR does not yet have a written procedure guiding its limited chain-of-custody obligations that are necessary if wood harvested from the state forests is to carry its certified status into the supply chain ● More attention to non-timber resources is needed. ● A higher level of consistency is needed with respect to monitoring sites of special significance to American Indians, in consultation with tribal representatives. ● DNR does not expressly monitor the creation or maintenance of local jobs that can be attributed to management of the state forests. 	<p><u>CARs</u></p> <p>2005.12</p>
<p>P9: Maintenance of High Conservation Value Forest</p>	<ul style="list-style-type: none"> ■ Although a comprehensive assessment to identify High Conservation Value Forests has not been done, substantial acreages of state forest lands have been protected in the past as Natural Areas, habitat for endangered species, potential old growth, or watersheds supporting a Natural River. Management in these areas is appropriate for HCVF. ■ A new system is now in place, guided by a Work Instruction, designed for assuring that areas meeting the definition of HCVF are identified and managed as such. ● Areas that have been identified in one of the categories listed above are clearly designated on maps and recorded in GIS format. ● Some High Conservation Value Areas are managed in cooperation with other agencies, although there is no explicit statement in the Biodiversity Conservation Planning Process that encourages such cooperative management. 	<ul style="list-style-type: none"> ■ A coordinated process of designating HCVF has just begun (Biodiversity Conservation Planning Proposal). Past designations have not resulted from a thorough assessment of eco-regions, and have, therefore, been conducted inconsistently throughout the system of state forest lands. There also has been an inconsistent public review of lands proposed for protection. Management plans are lacking in many areas where HCVF may be designated. Likewise, adequate monitoring may be lacking. 	<p><u>CARs</u></p> <p>2005.13</p>

4.2 Major CARs

Major CARs are major corrective action requests that are stipulated after the initial evaluation and before the operation is certified. Certification cannot be awarded if any Major CARs remain open.

The following Major CARs were issued to Michigan DNR during their field evaluation in late September. In response, DNR submitted documentation and presented additional evidence that enabled the audit team to close Major CAR 2005.12, and to downgrade Major CAR 2005.13 to a Minor CAR, on December 19, 2005.

Observation: DNR has not yet developed a written “documented control system” that assures conformance with applicable FSC chain-of-custody requirements necessary for the wood harvested from the state forests to carry forward the status as “FSC certified wood.”	
CAR 2005.12	Establish written chain-of-custody procedures that comply with the FSC Principles of Chain-of-Custody and that assure: a) written notification to all DNR stumpage purchasers that the certified status of the wood harvested from the state forests will not be maintained unless the purchaser is either, themselves, a holder of a FSC CoC certificate or member in good standing of a FSC Group CoC certificate b) all paperwork associated with timber sales on the state forests include the DNR’s unique FM/CoC certificate number (to be assigned at award of certification) c) DNR has developed procedures that will enable it to provide SCS with quarterly sales volumes, by purchaser, estimated as robustly as possible
Deadline	Prior to award of certification
Reference	<i>FSC Criterion/Indicator 8.3</i>

Note: In response to this Major CAR, DNR prepared and submitted to SCS a written chain of custody policy document that directly and adequately addresses each of the requested actions. Accordingly, this CAR has been closed.

Observation: While the audit team is very impressed with the actions initiated by DNR in response to the Scoping Visit Report, as formalized in the new Certification Work Instructions, a demonstration of sufficient conformance to the analytical, management and consultative requirements related to areas qualifying as “high conservation value forests” requires that some additional steps be taken prior to award of certification, steps that can be reasonably completed prior to the end of 2005, if sufficient staff resources are dedicated.	
CAR 2005.13	DNR must undertake the following actions with regard to the identification and management of areas meeting the FSC’s definition of “high conservation value forests” as further guided by the FSC Lake States Regional Standard: a) Name all members of the Biodiversity Conservation Committee and assure that the team members have sufficient available time to execute their duties b) Establish/clarify the process by which members of the public may make SCA/HCV/ERA nominations c) Document and revise as needed procedures for assuring coordination with other ownerships possessing HCVF areas within the landscape d) Develop/clarify HCVF monitoring protocols
Deadline	Prior to award of certification
Reference	<i>FSC Criterion/Indicator 9.1(a), 9.3(d) and 9.4(b)</i>

Note: Subsequent to the issuance of this Major CAR, DNR did complete the process of naming the members of the Biodiversity Conservation Committee (now called the Statewide Biodiversity Team) and

the first meeting of the committee is scheduled for January 5, 2006. Additionally, DNR submitted to SCS a summary document describing additional actions taken in response to this CAR. These actions entail: a) developing and posting on the DNR web site a document entitled: “Biodiversity Conservation on DNR-Owned Lands Conservation Area Recommendation Process,” b) developing a draft conservation area recommendation form, c) developing a draft schematic/flowchart that further describes the conservation area recommendation process, d) describing how the Statewide Biodiversity Team will take up the issue of coordinating with other landowners on high conservation area management and on HCVF monitoring. In the judgment of the auditors, these responses are of sufficient substance to warrant downgrading this Major CAR to a Minor CAR and narrowing the remaining focus.

The revised Minor CAR is as follows:

Observation: While the audit team is very impressed with the actions initiated by DNR in response to the Scoping Visit Report, as formalized in the new Certification Work Instructions, a demonstration of sufficient conformance to the analytical, management and consultative requirements related to areas qualifying as “high conservation value forests” requires additional actions to be undertaken after award of certification.	
CAR 2005.13	<p>DNR must undertake the following actions with regard to the identification and management of areas meeting the FSC’s definition of “high conservation value forests” as further guided by the FSC Lake States Regional Standard:</p> <ul style="list-style-type: none"> a) Finalize the establishment and public distribution of the process by which members of the public may make SCA/HCVA/ERA nominations b) Document and revise as needed procedures for assuring coordination with other ownerships possessing HCVF areas within the landscape c) Develop/clarify HCVF monitoring protocols
Deadline	At the time of the special surveillance audit in March, 2006.
Reference	<i>FSC Criterion/Indicator 9.1(a), 9.3(d) and 9.4(b)</i>

5.0 CERTIFICATION DECISION

5.1 Certification Recommendation

As determined by the full and proper execution of the SCS *Forest Conservation Program* evaluation protocols, the evaluation team hereby recommends that the Michigan State Forestlands as managed by the Michigan Department of Natural Resources be awarded FSC certification as a “Well-Managed Forest” subject to the corrective action requests stated in Section 5.2. Michigan DNR has demonstrated that their system of management is capable of ensuring adequate levels of conformance with the requirements of the FSC Lake States Regional Standard over the forest area covered by the scope of the evaluation. Michigan DNR has also demonstrated that the described system of management is being implemented consistently over the forest area covered by the scope of the certificate.

5.2 Initial Corrective Action Requests

Observation: In that there is not an accessible, comprehensive register of international agreements, conventions and treaties applicable to the management of the Michigan state forests, it is not possible for the audit team to confirm that there is adequate conformance with FSC Criterion 1.3. However, based upon the un-compiled documentary evidence and field observations, we are not aware of any evidence to suggest non-conformance with C.1.3, therefore justifying a minor rather than major Corrective Action Request.	
CAR 2005.1	Compile a concise yet comprehensive register (annotated list) of applicable international agreements, conventions and treaties and distribute to field units; complete a review to assure that the Department is in compliance with all applicable international requirements.
Deadline	60 days after award of certification
Reference	<i>FSC Criterion/Indicator 1.3(a)</i>

Observation: As indicated by the number of vacant and eliminated conservation officer, forest & fire officer, and forest officer positions as well as the extent of resource damage from unauthorized ORV use in many FMU units, as well as the general condition of state forest roads, the level of funding committed to public use management and road system maintenance is not sufficient to adequately protect the resource base, as required by the FSC Lake States Regional Standard.	
CAR 2005.2	Develop and pursue strategies for securing additional personnel and resources for public use management and road system maintenance; prepare a briefing report on steps taken and progress made.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006
Reference	<i>FSC Criterion/Indicator 1.5(a) and 5.1(c)</i>

Observation: While some progress has been made under the new Certification Work Instructions, the audit team concludes that more active efforts to invite the collaborative participation of tribal representatives, <i>at the FMU level</i> , is needed in order to demonstrate adequate conformance with elements of FSC Criteria 3.3 and 8.2.	
CAR 2005.3	Demonstrate continuing progress, at the FMU level, in inviting tribal participation in the identification of tribal resources and the development of appropriate management prescriptions as well as monitoring of the impacts of management on tribal resources; prepare a briefing report on steps taken and progress made.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006.
Reference	<i>FSC Criterion/Indicator 3.3(a), 3.3(b) and 8.2(d)3</i>

Observation: In the judgment of the audit team, there is not sufficient direction to field staff for assuring identification of archeological/cultural/historic sites of importance; even more so, there is no established guidance for assuring that any such sites found during field work are properly reported to the SHPO.	
CAR 2005.4	Develop and implement direction/protocols to DNR field personnel on the identification of sites of archeological, cultural, historic or community importance and the procedurally appropriate means for reporting such sites to the SHPO.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 4.4(b)</i>

Observation: The collaborative working relationship between DNR and MNFI is hampered by the recent cutbacks in funding for MNFI survey work on the state forests; the underlying goal of that collaboration—to identify and protect notable natural features found within the state forest system—is further hampered by inadequate guidance to DNR field staff on identifying state and federally listed plant species.	
CAR 2005.5	<ul style="list-style-type: none"> a) Develop and pursue strategies to assure a renewed/enhanced effort to conduct field surveys and assessments for rare, threatened, and endangered species and communities on the Michigan state forestlands. b) Develop and implement direction/protocols to DNR field personnel designed to assure more systematic on-the-ground assessment of state and federally listed plant species. c) Submit to SCS, no later than 6 months after award of certification, a briefing document that details progress made on parts a) and b).
Deadline	6 months after award of certification
Reference	<i>FSC Criterion/Indicator 6.1(a) and 6.2(c)</i>

Observation: In the course of examining recent (YOE 2003 and 2004) regeneration harvests on 8 FMFM FMUs, the audit team observed a substantial variation—across units and across individual foresters—in the extent and manner in which green retention is laid out and implemented. Likewise, the audit team concludes that more emphasis needs to be placed on recognizing and appropriately managing areas possessing resources of limited distribution (e.g., Canadian yew) and/or heightened sensitivity (e.g., seeps, springs and wet areas). Furthermore, stakeholder comments and field observations indicate that high populations of ungulates might have detrimental effects on the diversity of understory plants and regeneration of valued forest trees.	
CAR 2005.6	<ul style="list-style-type: none"> a) the ecological bases for in-stand structural retention, particularly during regeneration harvesting, to assure more consistent uptake across all FMUs b) the identification and management of areas (as small as portions of individual stands) possessing notable ecological attributes, to assure more consistent uptake across all FMUs c) an assessment—throughout the ownership—of effects of browsing by ungulates.
Deadline	By the time of the special surveillance audit during the first quarter of 2006, (a) and (b); and by the first annual surveillance audit, (c).
Reference	<i>FSC Criterion/Indicator 6.3(a)3, 6.3(a)5, 6.3(b)1, 6.3(c)3</i>

Observation: On the basis of document reviews and DNR personnel discussions, the audit team is unable to confirm adequate conformance to the FSC Lake States Regional Standard requirement that “forest owners or managers maximize habitat connectivity to the extent possible

at the landscape level.”	
CAR 2005.7	Within the OI/IFMAP and eco-regional planning processes, modify procedures as necessary to assure maximum practicable habitat connectivity.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006.
Reference	<i>FSC Criterion/Indicator 6.3(b)4</i>

Observation: The audit team notes that no additions to the Natural Areas Program have been made for over a decade, despite a substantial queue of nominated areas. The suspended status of this program was raised as a concern by a variety of stakeholder groups. Its suspended status is incompatible with exemplary performance relative to FSC Criterion 6.4.	
CAR 2005.8	Undertake necessary departmental actions to: a) re-establish active designations to the Natural Areas Program b) assure completion of the Biodiversity Conservation Committee’s Phase I analysis in time to provide substantive guidance in the development of the EUP eco-regional plan c) submit to SCS, no later than 6 months after award of certification, a briefing document that details progress made on parts a) and b).
Deadline	At the time of the 2006 surveillance audit.
Reference	<i>FSC Criterion/Indicator 6.4(a) and 6.4(b)</i>

Observation: As is recognized by the DNR, its key stakeholders, and the audit team, a timely completion of the three eco-regional plans is a linchpin to the Department’s focused response to the FSC Scoping Visit Report that was submitted in November, 2004. If these yet to be finished eco-regional plans were all that comprised management planning for the state forests, a Major CAR would need to be issued, requiring completion of these plans prior to award of certification. But, in fact, these eco-regional plans are but one component of a complex array of planning documents and initiatives undertaken by DNR, spanning multiple temporal and spatial scales as well as subject matter. It is this body of planning documents and initiatives that, in the judgment of the audit team, constitutes the “management plan” for the Michigan state forests. As such, a minor CAR is deemed appropriate. But failure to complete the eco-regional plans on the schedule that DNR has publicly committed to would constitute a major non-conformance.	
CAR 2005.9	a) Commit sufficient departmental resources to complete the three eco-regional plans by the announced completion dates and in full conformance with the established protocols, including substantive stakeholder involvement. b) Conduct an assessment of current resources committed to EUP eco-regional planning effort and augment as needed, in light of the much shorter time line committed to for completing this plan.
Deadline	At the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion 7.1(b)6</i>

Observation: In the course of document review and DNR personnel discussions, the audit team was unable to identify a comprehensive written summary as to the frequency and scope of periodic revisions to the body of plans/documents that collectively constitute the “management plan” for the Michigan state forests.	
CAR 2005.10	Establish and make publicly available written protocols for the scope and periodicity of updates/revisions to all management planning documents, including but not limited to eco-regional planning.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 7.2(a)</i>

Observation: As a state agency, DNR documents are generally available to the public. Indeed,

there is a multiplicity of management plans and planning guidance documents that are available, most of which can be accessed on the DNR Web site. But this multiplicity of documents presents a substantial challenge to all but the most motivated members of the public to grasp the totality of the DNR planning activities and how each individual plan—covering different spatial and/or temporal scales—fit together into an overarching management program designed to attain established goals and objectives. This runs counter to the transparency and public access precepts imbedded in the FSC standards and protocols, such as found in Principle

CAR 2005.11	Develop and make publicly available a tractable and concise umbrella summary document that meets the FSC content requirements and provides a clear description of how the many DNR management planning documents and initiatives function as a cohesive whole.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 7.4(b)</i>

Observation: While the audit team is very impressed with the actions initiated by DNR in response to the Scoping Visit Report, as formalized in the new Certification Work Instructions, a demonstration of sufficient conformance to the analytical, management and consultative requirements related to areas qualifying as “high conservation value forests” requires additional actions to be undertaken after award of certification.

CAR 2005.13	DNR must undertake the following actions with regard to the identification and management of areas meeting the FSC’s definition of “high conservation value forests” as further guided by the FSC Lake States Regional Standard: <ul style="list-style-type: none"> a) Finalize the establishment and public distribution of the process by which members of the public may make SCA/HCVA/ERA nominations b) Document and revise as needed procedures for assuring coordination with other ownerships possessing HCVF areas within the landscape c) Develop/clarify HCVF monitoring protocols
Deadline	At the time of the special surveillance audit in March, 2006.
Reference	<i>FSC Criterion/Indicator 9.1(a), 9.3(d) and 9.4(b)</i>

5.3 Recommendations

Background/Justification: The Michigan state legislature is presently considering, and could in the future consider legislation that, if enacted, may constitute a fundamental conflict with the FSC certification standards.

REC 2005.1	To minimize the likelihood of DNR finding itself in an irreconcilable situation with respect to conforming with the FSC Lake States Regional Standard in the event that conflicting state legislation was to be enacted, DNR should consider establishing an informal review process where SCS is apprised of pending legislation and provided with an opportunity to offer comment as to the implications for continued FSC certification.
Reference	FSC Criterion 1.6

Background/Justification: The consultation with the SHPO is occurring with respect to the possible presence of recorded sites, DNR field personnel are not affirmatively looking for and may not have acquired experience/skills in the identification and reporting of possible archeological/historic/cultural resources, tribal or otherwise, that may not yet be recorded with the SHPO.

REC 2005.2	To aid in the effective implementation of the protocols requested in CAR 2004.5, DNR should consider additional training and field guidance aimed at more affirmatively inventorying and reporting archeological, cultural,
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	and historic sites that have not yet been recorded.
Reference	FSC Criterion 3.3

Background/Justification: Managers of non-tribal forests, be it public or private forests, generally would benefit from greater awareness of how other managers are surveying for archeological and cultural resources of significance to indigenous peoples.

REC 2005.3	It is recommended that DNR make contact with the USDA Forest Service as well as the Wisconsin and Minnesota DNRs to assess their approaches to surveying for archeological/cultural/historic resources.
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Reference	FSC Criterion 3.3
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Background/Justification: Despite the existence of a multiplicity of mechanisms by which stakeholders can have their input received by DNR managers and can participate in planning and decision-making processes, stakeholders from across the spectrum expressed to the auditors a sense that DNR is not being adequately transparent. While such frustrations may in part be triggered more from dissatisfaction over the results of the planning and decision-making processes than from inadequacies in the stakeholder input/participation mechanisms, this rather widespread perception is something that DNR ought to try to address.

REC 2005.4	DNR should develop a strategy for comprehensively reviewing its stakeholder input/participation mechanisms in order to identify and implement opportunities for improving overall stakeholder satisfaction with DNR's efforts at transparency.
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Reference	<i>FSC Indicator 4.4.e</i>
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Background/Justification: While non-timber product utilization is not a widespread activity on the Michigan state forests, some products are nevertheless harvested/removed such as blueberries, fuel wood, and mushrooms. Such activities are covered by some form of permit issued by DNR but it is our sense that non-timber products do not receive as much attention in the DNR's planning documents as would be ideal

REC 2005.5	DNR personnel should consider incorporating, more explicitly, non-timber product extraction in planning documents such as the eco-regional plans.
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Reference	FSC Criterion 5.2
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Background/Justification: During field reconnaissance, the auditors observed that efforts to retain/recruit large woody debris in harvest units are variable across FMUs.

REC 2005.6	DNR personnel should explore options for increasing efforts at large woody debris retention in harvest units
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Reference	FSC Criterion 5.3
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Background/Justification: An explicit effort to quantitatively assess "sustainability" (i.e., to quantitatively determine a maximum long term sustained yield level) has not been undertaken.

REC 2005.7	It is recommended that DNR explore opportunities, perhaps as part of the eco-regional planning process, to complete a mid-spatial scale quantitative sustainability analysis of timber harvest levels. This analysis should use limiting factors and/or other considerations to quantitatively confirm whether harvest levels on the state forests are sustainable.
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Reference	FSC Criterion 5.6
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Background/Justification: The effects of deer browse are not adequately understood.

REC 2005.8	With respect to part (c) of CAR 2005.6, it is recommended that DNR consult with Drs. Michael Walters and Riqua Campa at Michigan State University who have recently completed research on the Michigan ungulate herbivory
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Reference	FSC Criterion 6.3.b.1
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Background/Justification: Compartment boundaries that are rectilinear in shape or do not coincide with natural stand boundaries result in unnecessary adverse ecological effects as compared to compartments that follow natural stand patterns.	
REC 2005.9	As part of the OI/compartment review, DNR should assess the configuration of compartment boundaries and, if appropriate, modify boundaries to avoid rectilinear patterns.
Reference	FSC Criterion 6.3.b

Background/Justification: Two sites sampled during field audit illustrated excessive disruption of soil and regeneration by processing equipment in northern hardwood stands. In both cases, harvesting equipment moved extensively throughout the stand, instead of following a minimal network of cutting lanes. More awareness of potential for soil compaction with such practices would be appropriate.	
REC 2005.10	DNR foresters should engage in a structured discussion of the potential detrimental effects of soil compaction, root damage, and harm to under story plants than can result from harvesting equipment. The comparative environmental implications of dispersed skidding versus skidding on defined trails should be examined.
Reference	<i>FSC Criterion/Indicator 6.3.c.2</i>

Background/Justification: Data on conversion of state forestland to non-forest cover and uses is not compiled and, as such, has not been made available to the auditors.	
REC 2005.11	As part of the IFMAP/OI process, data on forest conversions to non-forest cover and uses should be collected and compiled.
Reference	FSC Criterion 6.10

6.0 SURVEILLANCE EVALUATIONS

If certification is awarded, FSC protocols require that a surveillance evaluation will take place at least annually to monitor the status of any open corrective action requests and review the continued conformance of Michigan DNR's management of the state forestlands to the FSC Lake States Regional Standard. Because of the substantial and recent changes in MDNR policies, as formalized in the 21 new Work Instructions, the audit team has determined that a special audit, during the first quarter of 2006, is needed.

Public summaries of surveillance evaluations will be posted separately on the SCS website (www.scs-certified.com).

SECTION B - DETAILED RESULTS OF THE FULL EVALUATION

1.0 DETAILED EVALUATION OF CONFORMANCE

The findings and observations of the evaluation team are presented in this section, structured according to the 9 applicable FSC Principles. To follow are brief descriptions of each Principle, Criterion, and Indicator and the team's findings and judgments at the Criterion and Indicator level.

1.1 PRINCIPLE #1: COMPLIANCE WITH LAWS & FSC PRINCIPLES

Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

This FSC Principle is elaborated through a set of 6 Criteria that focus on issues such as conformance to all applicable national and local laws and regulations, payment of legally prescribed fees, taxes and royalties, protections against illegal harvesting and other unauthorized activities, and demonstrating a long-term commitment to adhere to the FSC Principles & Criteria.

Standard	Score	Comments
C1.1 Forest management shall respect all national and local laws and administrative requirements.	85	The audit team has determined there is clear overall conformance with this Criterion.
1.1.a. Forest management plans and operations comply with applicable Federal, state, county, tribal, and municipal laws, rules, and regulations.		Overall, adequate conformance with applicable laws, rules and regulations was observed. The development and implementation of the new Work Instructions (organized into 6 WAGs-Work Area Groups) will, in our judgment, result in a substantial improvement in overall conformance.
1.1.b. Forest management plans and operations comply with state Best Management Practices (BMPs) (see Appendix for references) and other government forest management guidelines applicable to the forest, both voluntary and regulatory (see also Criterion 6.5)		Generally, the team observed solid conformance with state BMPs; unauthorized ORV use is causing resource damage, especially on LP units, that does not conform with BMPs.
1.1.c. Forest management plans and operations meet or exceed all applicable laws and administrative requirements with respect to sharing public information, opening records to the public, and following procedures for public participation.		While some groups believe that DNR could be more forthright in sharing information—most recently, the new Work Instructions—it is our sense that DNR is complying with applicable statutes and regulations pertaining to public information.
C1.2. All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.	90	The audit team has determined there is outstanding overall conformance with this Criterion.
1.2.a. Taxes on forest land and timber, as well as other fees related to forest management, are paid in a timely manner and in accordance with state and local laws.		No evidence to suggest non-conformance with this indicator, as we would expect of a state land management agency. Payments in lieu of taxes (PILT) have, in recent years, been delayed but it is our understanding that local jurisdictions are eventually receiving full payment and that any delays are not causing tensions between the department and, for instance, county commissions. This will be monitored during future surveillance audits.
C1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.	80	The audit team has determined there is marginal overall conformance with this Criterion.
1.3.a. Forest management operations comply with all binding treaties or other agreements to which the U.S. is a party, including treaties with American Indian tribes.		While the auditors observed nothing to suggest non-conformance with this criterion/indicator, MDNR was unable to provide the auditors with a concise/compiled register of all applicable international agreements and the salient obligations. As such, it is not possible to definitively ascertain conformance. See corrective action request, below.
C1.4. Conflicts between laws, regulations and the FSC	90	The audit team has determined there is outstanding overall

Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and by the involved or affected parties.		conformance with this Criterion.
1.4.a. Where conflicts between laws and FSC Principles and Criteria occur, they are referred to the appropriate FSC body.		<p>MDNR personnel have devoted considerable collective effort to understand and assess this certification standard, which obviously will help in assuring that any conflicts are recognized.</p> <p>MDNR personnel have assured the auditors that, were the state forests to be certified, a written policy statement will be publicly posted (e.g., on the department web site) committing the department to bring any such conflicts to the attention of SCS/FSC, promptly.</p>
C1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.	79	The audit team has determined there is marginal non-conformance with this Criterion (CAR 2005.2).
1.5.a. Forest owners or managers implement measures to prevent illegal and unauthorized activities in the forest.		Management/control of unauthorized use of the state forests, particularly unauthorized ATV/ORV use is clearly a high priority and a widely recognized concern for the department and the object of considerable effort. But the fact remains that, due to budget reductions that have resulted in reduced staff positions allocated to public use management, there is a level of unauthorized use—particularly in FMUs in the LP—that ranges from moderate to severe. More resources need to be devoted to this growing management challenge. See corrective action request, below.
C1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.	90	The audit team has determined there is outstanding overall conformance with this Criterion.
1.6.a. Forest owners or managers provide written statements of commitment to the FSC Principles and Criteria. The commitment is stated in the management plan [see 7.1], a document prepared for the certification process, or another official document.		<p>Notably, the Michigan State Legislature enacted a bill mandating DNR to seek third-party certification against a credible program; in response to this legislative mandate, the DNR elected to seek dual certification under both the FSC and SFI programs.</p> <p>If certification is awarded, and prior to execution of a certification contract, DNR personnel have assured the auditors that a written commitment to managing the state forests in conformance with the FSC Principles & Criteria will be posted on the department web site.</p> <p>Over the past year, 12 new staff positions and some \$1.5 million in special funds has been allocated to or triggered by the certification initiative.</p> <p>DNR has developed and implemented a entire set of Work Instructions expressly aimed at addressing conformance to the certification standards, particularly the gaps identified during the 2004 Scoping Visit.</p> <p>DNR senior staff and managers view certification as a “spring board” mechanism for achieving even wider, more substantive change, over time. The auditors consider this to be a good indication of the level of commitment to the FSC P&C that can be expected from the MDNR, if certification is awarded. That is, senior managers embrace the certification process as being a tool that they can use to bring about desired change, rather than seeing certification as some sort of obligation or externally-driven necessity.</p>
1.6.b Forest owners or managers document the reasons for seeking partial certification.		All state forest units are included in the scope of this certification evaluation
1.6.c Forest owners or managers document strategies and silvicultural treatments for several harvest entries that meet the FSC Principles and Criteria (see Principle 7).		<p>Management planning, including for the management of the timber resource, incorporates multiple temporal and spatial scales, including the long term. Long-range harvest scheduling/modeling is undertaken and will increase in importance as the eco-regional planning process moves towards completion over the next 2 years.</p> <p>Management strategies are well documented and available to the public.</p> <p>Pending state legislation, if enacted, could put DNR in a difficult</p>

situation with respect to ongoing conformance with this criterion as well as other criteria such as C5.6 and all of P6. This legislation would mandate harvest levels on the state forests and mandate that all stands reviewed as part of the YOE/OI process must be scheduled for harvest, thereby overriding the “limiting factor” analyses presently being conducted.

Importance Weighted Aggregate Score for Principle 1:

Employing the PAIRWISE algorithm⁷, the evaluation team for a prior state forestlands project in the Lake States developed weights of relative importance for each of the 6 Criteria in this Principle. In the judgment of the SCS program managers and the SCS team leader for the Michigan DNR project, as well as after review by the full MDNR audit team, these same weights were deemed appropriate for use in this project. Under SCS’ accredited protocols, assignment of weights of relative importance is one means by which certification evaluations recognize and incorporate regional circumstances. In this case, the weights were designed to reflect the Lake States regional context, particularly with respect to management of state forestlands.

FSC Principle #1: Compliance with Laws and FSC Principles	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
1.1	.32	85	84.8
1.2	.11	90	
1.3	.14	80	
1.4	.00	90	
1.5	.15	79	
1.6	.28	90	

Applying the normalized weights of relative importance to the 5 assigned performance scores, and rounding to the nearest integer, leads to a weighted average score for the Principle of:

85

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Corrective Action Requests:

Observation: In that there is not an accessible, comprehensive register of international agreements, conventions and treaties applicable to the management of the Michigan state forests, it is not possible for the audit team to confirm that there is adequate conformance with FSC Criterion 1.3. However, based upon the un-compiled documentary evidence and field observations, we are not aware of any evidence to suggest non-conformance with C.1.3, therefore justifying a minor rather than major Corrective Action Request.

CAR 2005.1	Compile a concise yet comprehensive register (annotated list) of applicable international agreements, conventions and treaties and
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⁷ PAIRWISE is a decision support model developed by SCS in the early 1990’s for the purpose of enabling audit teams and or SCS program managers to develop normalized weights of relative importance for sets of criteria. These normalized weights are developed to enable the generation of a weighted average score for each of the applicable FSC Principles; the Principle-level scores are central to the decision rule for the award of certification. See the SCS Forest Conservation Program Operations Manual for more detail (www.scs-certified.com).

	distribute to field units; complete a review to assure that the Department is in compliance with all applicable international requirements.
Deadline	60 days after award of certification
Reference	<i>FSC Criterion/Indicator 1.3(a)</i>

Observation: As indicated by the number of vacant and eliminated conservation officer, forest & fire officer, and forest officer positions as well as the extent of resource damage from unauthorized ORV use in many FMU units, as well as the general condition of state forest roads, the level of funding committed to public use management and road system maintenance is not sufficient to adequately protect the resource base, as required by the FSC Lake States Regional Standard.	
CAR 2005.2	Develop and pursue strategies for securing additional personnel and resources for public use management and road system maintenance; prepare a briefing report on steps taken and progress made.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006
Reference	<i>FSC Criterion/Indicator 1.5(a) and 5.1(c)</i>

Recommendations:

Background/Justification: The Michigan state legislature is presently considering, and could in the future consider legislation that, if enacted, may constitute a fundamental conflict with the FSC certification standards.	
REC 2005.1	To minimize the likelihood of DNR finding itself in an irreconcilable situation with respect to conforming with the FSC Lake States Regional Standard in the event that conflicting state legislation was to be enacted, DNR should consider establishing an informal review process where SCS is apprised of pending legislation and provided with an opportunity to offer comment as to the implications for continued FSC certification.
Reference	FSC Criterion 1.6

1.2 PRINCIPLE #2: TENURE AND USE RIGHTS/RESPONSIBILITIES

Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

This FSC Principle, detailed through 3 Criteria, focuses on the long-term tenure and use rights to the land that is undergoing the certification evaluation. Forest managers seeking FSC-endorsed certification must establish clear and legal ownership or right to manage the defined forest area that is being evaluated. Customary use rights, if clearly demonstrated, must be appropriately honored.

Standard	Score	Comments
C2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.	95	The audit team has determined there is outstanding overall conformance with this Criterion.
2.1.a. Forest owners or managers document the legal and customary rights associated with the forest. These rights include both those held by the party seeking certification and those held by other parties.		All legal use rights on the state forests are properly recognized and documented. Beyond question, DNR has the statutory authority to manage the subject forest estate, which is unquestionably owned by and for the benefit of the citizens of Michigan.
2.1.b. Affected land boundaries are clearly identified on the ground by the forest owner or manager prior to commencement of management activities.		Standard operating procedure is that timber sale boundaries are clearly marked with paint prior to commencement of site disturbing operations.

	Generally, state forest boundaries are not well marked except for those areas where active timber management is scheduled to take place.	
C2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies.	91	The audit team has determined there is outstanding overall conformance with this Criterion.
2.2.a. The forest owner or manager allows legal and customary rights to the extent that they are consistent with the conservation of the forest resource and the objectives stated in the management plan.		<p>Issues of customary upland use by Michigan tribes of the state land is presently being adjudicated in the courts—a matter of interpretation of initial treaty rights. DNR is pursuing resolution in an appropriate manner.</p> <p>ATV/ORV use is causing resource damage and better control is needed (CAR 2005.2)</p> <p>Resource damage issues aside, the state forestlands are open to the use and enjoyment of the citizens of Michigan, and they serve as a highly important resource for public uses such as recreation and hunting.</p>
2.2.b. On ownerships where customary use rights or traditional and cultural areas/sites exist, forest owners or managers consult with concerned groups in the planning and implementation of forest management activities.		<p>DNR maintains active dialogue, through multiple mechanisms, will all stakeholders that express an interest in the affairs of state forestland management.</p> <p>DNR has, over the past year, begun to put more effort into dialogue and consultation with federally recognized tribes</p>
C2.3. Appropriate mechanisms shall be employed to resolve disputes over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.	90	The audit team has determined there is outstanding overall conformance with this Criterion.
2.3.a. The forest owner or manager maintains relations with community stakeholders to identify disputes while still in their early stages. If disputes arise, the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If negotiation fails, existing local, state, Federal, and tribal laws are employed to resolve claims of land tenure (see Glossary).		<p>DNR personnel, through established public interaction mechanisms or simply through informal modes of communication, do an exemplary job of striving to maintain good working relations with stakeholders as defined by “communities of place” and “communities of interest.”</p> <p>As is the current situation with interpretation of initial tribal treaty rights, the courts system does provide an appropriate means for resolving disputes that cannot be resolved informally. Prior to litigation, the Administrative Procedures Act provides for a formal dispute resolution mechanism.</p>
2.3.b. The forest owner or manager provides information to the certification body regarding unresolved and/or ongoing disputes over tenure and use-rights.		<p>The auditors are satisfied that DNR personnel have been fully forthcoming in bringing to our attention such unresolved issues and disputes. Generally, issues and disputes arise over matters beyond tenure or use-rights.</p> <p>DNR has recently informed power corridor easement holders that certain herbicides can no longer be used; this has caused some concern with those easement holders and DNR will need to continue to dialogue with those individuals in order to settle the matter.</p>

Importance Weighted Aggregate Score for Principle 2:

Applying the weights of relative importance for the 3 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #2 Tenure and Use Rights and Responsibilities	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
2.1	.54	95	

2.2	.16	91	92.9
2.3	.30	90	

Rounding to the nearest integer, the weighted average score for this Principle is:

93

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

1.3 PRINCIPLE #3: INDIGENOUS PEOPLES' RIGHTS

The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.

This FSC principle is concerned about the rights of indigenous peoples to own, use and manage their lands and territories. The Criteria focus on issues such as tenure rights of indigenous people, protection of cultural sites, and compensation for traditional knowledge.

Standard	Score	Comments
C3.1. Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.	NA	
3.1.a. On tribal lands, forest management and planning includes a process for input by tribal members in accordance with their laws and customs.		The state forestlands are not tribal lands.
3.1.b. Forest management on tribal lands is delegated or implemented by an authorized tribal governing body.	NA	
C3.2. Forest management shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples.	83	The audit team has determined there is marginal overall conformance with this Criterion.
3.2.a. Forest owners or managers identify and contact American Indian groups that have customary use rights or other legal rights to the management area and invite their participation in the forest planning processes, appropriate to the scale and intensity of the operation. (see also Criterion 4.4.)		A senior DNR position is devoted, largely, to maintaining interactions with tribal representatives. In response to the findings of the Scoping Visit (gap analysis), DNR has ramped up its efforts at interacting with the Michigan tribes; a meeting was held in April where all tribes were invited—roughly half of the 12 federally recognized tribes attended.
3.2.b. Steps are taken during the forest management planning process and implementation to protect tribal resources that may be directly affected by certified operations such as adjacent lands, bodies of water, critical habitats, and riparian corridors as well as other resource uses such as rights to hunt, fish, or gather.		At the compartment review/operations inventory planning level (tactical level), the SHPO is consulted; however, the auditors observed very few instances where field DNR personnel are actively looking for new cultural resources rather than merely determining if already recorded sites exist with the planned areas of operation. DNR could be more affirmative in this arena.
C3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.	78	The audit team has determined there is marginal non-conformance with this Criterion (CAR 2005.3)
3.3.a. Forest owners or managers make systematic efforts to identify areas of cultural, historical, and/or religious significance. They invite participation of tribal representatives (or other appropriate persons, where tribal entities are lacking) in the identification of current or traditionally significant sites within the forest proposed for certification.		Per observations under 3.2.b, the DNR's effort is systematic (i.e., it is part of the compartment review/OI process) but it is not very affirmative or as culturally sensitive as it should be. Invitations to participate in planning activities are extended to tribal representatives, but it is our sense that such invitations need to be more culturally sensitive—merely including tribes in a mass mailing to stakeholders is not culturally sensitive or appropriate for seeking interaction with sovereign nations. This is particularly an issue at the

	FMU (field) level where the lack of cultural sensitivity and commitment to affirmative tribal interaction is most notable.
3.3.b. Forest owners and managers consult with tribal leaders (or other appropriate persons, where tribal entities are lacking) to develop mechanisms that ensure forest management operations protect from damage or interference those areas described in 3.3.a. and incorporate these special places into forest management and operational plans.	The efforts under the leadership of the Upper Peninsula DNR Field Deputy Director and Tribal Coordinator (Jim Eckdal) are positive but only an initial step towards exemplary conformance with the expectations regarding tribal interaction that are imbedded in this certification standard.
3.3.c. Confidentiality of disclosures is maintained in keeping with applicable laws and the requirements of tribal representatives.	The auditors observed good conformance with the indicator.
C3.4. Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.	NA
3.4.a. Forest owners or managers respect the confidentiality of tribal knowledge and assist in the protection of tribal intellectual property rights.	See Indicator 3.3.c. DNR does not believe nor does any tribe assert, as far as the auditors are aware, that the department is utilizing tribal intellectual property rights in the course of managing the state forests.
3.4.b. A written agreement is reached with individual American Indians and/or tribes prior to commercialization of their indigenous intellectual property, traditional knowledge, and/or forest resources. The individuals and/or tribes are compensated when such commercialization takes place.	Not applicable

Importance Weighted Aggregate Score for Principle 3:

Applying the weights of relative importance for the 4 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #3 <i>Indigenous Peoples' Rights</i>	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
3.1	.--	NA	80.5
3.2	.50	83	
3.3	.50	78	
3.4	.--	NA	

Rounding to the nearest integer, the weighted average score for this Principle is:

81

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Corrective Action Requests:

Observation: While some progress has been made under the new Certification Work Instructions, the audit team concludes that more active efforts to invite the collaborative participation of tribal representatives, <i>at the FMU level</i> , is needed in order to demonstrate adequate conformance with elements of FSC Criteria 3.3 and 8.2.	
CAR 2005.3	Demonstrate continuing progress, at the FMU level, in inviting tribal participation in the identification of tribal resources and the development of appropriate management prescriptions as well as

	monitoring of the impacts of management on tribal resources; prepare a briefing report on steps taken and progress made.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006.
Reference	<i>FSC Criterion/Indicator 3.3(a), 3.3(b) and 8.2(d)3</i>

Recommendations:

Background/Justification: The consultation with the SHPO is occurring with respect to the possible presence of recorded sites, DNR field personnel are not affirmatively looking for and may not have acquired experience/skills in the identification and reporting of possible archeological/historic/cultural resources, tribal or otherwise, that may not yet be recorded with the SHPO.	
REC 2005.2	To aid in the effective implementation of the protocols requested in CAR 2004.5, DNR should consider additional training and field guidance aimed at more affirmatively inventorying and reporting archeological, cultural, and historic sites that have not yet been recorded.
Reference	FSC Criterion 3.3

Background/Justification: Managers of non-tribal forests, be it public or private forests, generally would benefit from greater awareness of how other managers are surveying for archeological and cultural resources of significance to indigenous peoples.	
REC 2005.3	It is recommended that DNR make contact with the USDA Forest Service as well as the Wisconsin and Minnesota DNRs to asses their approaches to surveying for archeological/cultural/historic resources.
Reference	FSC Criterion 3.3

1.4 PRINCIPLE #4: COMMUNITY RELATIONS & WORKERS' RIGHTS

Forest management operations shall maintain or enhance the long-term social and economic well being of forest workers and local communities.

This FSC Principle, elaborated through 5 Criteria, addresses the effects of forest management on the well being of forest workers and local communities. The Criteria focus on issues such as: preferences for local employment, compliance with employee health and safety regulations, rights of workers to organize, completion of social impact assessments, and employee grievance resolution mechanisms. In short, this principle expresses the position that exemplary forest management must include a conscious sensitivity to the interests of the most directly impacted stakeholders: employees, contractors and local communities.

Standard	Score	Comments
C4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.	93	The audit team has determined there is outstanding overall conformance with this Criterion.
4.1.a. Opportunities for employment, contracting, procurement, processing, and training are as good for non-local service providers as they are for local service providers doing similar work.		With respect to contracting, MDNR employs a competitive bidding system that does not discriminate against non-local bidders. With respect to employment with the department, we note that the professionals with which we interacted during the audit come from around the upper mid-west and the U.S. No evidence was uncovered that would suggest any bias against non-local service providers.
4.1.b. Forest work is packaged and offered in ways that create quality work opportunities for employees, contractors, and their workers.		While ongoing state government austerity programs in response to revenue shortfalls have eroded employee benefits and employment opportunities and, to some extent, employee morale, the auditors are

	<p>nonetheless impressed by the very positive esprit de corps demonstrated by the DNR employees with which we interacted during the course of this certification evaluation. Based upon interviews with a wide variety of employees, we conclude that DNR employment still represents a quality employment opportunity with a level of job security simply no longer associated with employment in the private sector.</p>	
4.1.c. Forest owners or managers contribute to public education about forestry practices.	<p>Conformance with this indicator is exemplary; a wide array of efforts at public education about forestry and forestry practices exist; DNR actively collaborates with MSU and other academic institutions on research, extension and public education.</p> <p>In response to the certification gap analysis reports submitted in late 2004, DNR developed a new Work Instructions relevant to this indicator:</p> <ul style="list-style-type: none"> 6.1: Implementing Public Information and Educational Opportunities on State Forests 	
4.1.d. Forest owners or managers participate and invest in the local economy and civic activities.	<p>DNR and its workforce is a very positive component of the rural communities and economies surrounding the state forests; there is an exemplary level of integration into local communities</p>	
4.1.e. Employee compensation and hiring practices meet or exceed the prevailing local norms for work within the forest industry that requires equivalent education, skills, and experience.	<p>Salary levels for DNR employees are less than industrial norms but benefits (notably the public employees pension program) exceed industrial norms; the overall compensation package is favorable.</p> <p>On the negative side, DNR employees are involuntarily “banking” 4 hours per pay period.</p>	
4.1.f. Forest owners or managers assure that contractors, subcontractors, intermediaries, and persons hired by them are covered and protected by all state and Federal labor laws regarding discrimination, wages, benefits, and other conditions of employment.	<p>In response to identification of this indicator as a “gap” during the Scoping Visit, DNR modified its standard contract specifications to include a new standard requirement that contractors comply with all applicable laws and regulations, including labor laws.</p>	
C4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.	83	The audit team has determined there is marginal overall conformance with this Criterion.
4.2.a. The forest owner or manager and their contractors develop and implement safety programs and procedures.	<p>In response to the findings of the Scoping Visit, DNR has increased in the emphasis on safety programs and procedures, in cooperation with its contractors. Overall, the level of conformance to safety procedures will be raised with the issuance of a new Work Instruction (7.2) on field safety. However, this will remain of subject of review during surveillance audits since the track record is very limited owing to the fact that these new procedures have just been put in place.</p>	
C4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labour Organization (ILO).	89	The audit team has determined there is clear overall conformance with this Criterion.
4.3.a. Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.	<p>Michigan is a strong union state and non-supervisory DNR employees are unionized. Standard contract language includes a requirement of compliance with all applicable laws of Michigan, including the right to organize</p>	
4.3.b. Forest owners or managers and their contractors develop effective and culturally sensitive mechanisms to resolve disputes between workers and management.	<p>DNR employees have available to them grievance and dispute resolution procedures. Dispute resolution mechanisms for employees of contractors are less apparent.</p>	
C4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups directly affected by management operations.	82	The audit team has determined there is marginal overall conformance with this Criterion.
4.4.a. On lands with multiple owners, a process is provided that assures the opportunity for fair and reasonable input from the landowners and/or shareholders.	<p>As the forest estate that is the subject of this evaluation is comprised of state-owned forestland, there are indeed multiple “owners”, namely the citizens of Michigan. DNR has in place an impressive array of standing committees and other mechanisms by which it is possible for citizen stakeholders to provide input into the management of the state forests. The pathways for input include:</p> <ul style="list-style-type: none"> The state legislature (through elected representatives) Natural Resources Commission 	

	<ul style="list-style-type: none"> • Statewide Forest Advisory Committee • Numerous other resource-specific advisory committees (e.g., parks, ORV, snowmobiles, old growth) • Resource specific working groups that include DNR employees and external members • Consultation mechanisms with eco-regional planning protocols such as related to C&I development, comment on draft plans, etc. • FMU annual open houses, linked to compartment reviews • Compartment reviews that are open to the public • Opportunities to offer input to DNR personnel who frequently make presentations to local groups, organizations and county commissions <p>On the DNR web site, there is a link to a document: “Managing Michigan’s State Forests: Your Guide to Participation”</p>
4.4.b. Input is sought in identifying significant sites of archeological, cultural, historical, or community importance, that are to be designated as special management zones or otherwise protected during operations.	DNR field personnel, as part of compartment reviews, consult the SHPO but overall effort could be more affirmative than it presently is the case.
4.4.c. Viewpoints and feedback are solicited from people and groups directly affected by forest management operations and its associated environmental and aesthetic effects (e.g., logging, burning, spraying, and traffic). Significant concerns are addressed in management policies and plans.	See 4.4.a.
4.4.d. Forest owners or managers of large and mid-sized (see Glossary) forests provide opportunities for people directly affected by management operations to provide input into management planning.	See 4.4.a. Opportunities for stakeholder input are most limited at the mid-spatial scale; there is an effective mechanism at the compartment level and the eco-regional planning protocols have and will afford good opportunities at the large scale. But at a mid-spatial scale such as at the level of examining management options for the mesic conifers, DNR has not developed as effective of mechanisms
4.4.e. For public forests, consultation will include the following components:	
1. Legislative and historical mandates are included in the plan, and provisions are made for their accomplishment.	Legislative and historical mandates are extensively presented on the DNR web site
2. Clearly defined and accessible methods for public participation are provided in both the strategic (long-range) and tactical (short-range) planning processes, including initial adoption and subsequent amendments.	See 4.4.a. as well as the DNR web site. In response to the certification gap analysis reports submitted in late 2004, DNR developed a new Work Instructions relevant to this indicator: <ul style="list-style-type: none"> • 1.5: Social Impact Considerations and Public Involvement Processes <p>Overall, the auditors conclude that DNR’s programs, policies and mechanisms constitute conformance to this indicator. But despite the existence of an array of formal and informal mechanisms by which DNR obtains stakeholder input and offers opportunities for public participation, many MI stakeholders expressed to the auditors a sense that DNR is not as forthcoming as would be desired. In that DNR, like any public agency, finds itself in a position of crafting compromise solutions that balance competing public desires. Inherently, compromise solutions may not satisfy all stakeholders and in the face of dissatisfaction, stakeholders may tend to feel that their input is not being heard or adequately solicited. That said, the auditors believe that DNR needs to actively challenge itself to provide enhanced opportunities for its diverse stakeholders to be fully informed about departmental programs and activities—see Recommendation.</p>
3. Public notification is sufficient to allow interested citizens of the affected jurisdiction and/or other people and groups directly affected by management operations the chance to learn of upcoming opportunities for public	Open houses and compartment reviews are clearly responsive to this indicator. Eco-regional planning includes several iterations of stakeholder

review and/or comment on the proposed management.	consultation, each stage widely noticed well in advance. Some environmental organizations believe that DNR is not as forthcoming as it should be with respect to detailed information about planned timber harvesting activities. Those views notwithstanding, there is extensive evidence to support a conclusion of adequate conformance to this indicator. For instance, the DNR web site includes easily accessible information such as the schedules of open houses held at each FMU	
4. The final planning decisions are based on legal mandate, public input, credible scientific analysis, and the productive capacity of the land and are made by professional employees, hired by the public, or other legally authorized parties.	While final management decisions inherently represent a balancing of competing and conflicting considerations and stakeholder desires, there is no evidence to suggest the DNR planning decisions fail to conform in any way with this indicator.	
5. An accessible and affordable appeals process to planning decisions is available.	Michigan has an Administrative Procedures Act that affords a formal appeal mechanism available to any stakeholder challenging a decision rendered by the DNR.	
C4.5. Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.	86	The audit team has determined there is clear overall conformance with this Criterion.
4.5.a. The forest owner or manager attempts to resolve grievances and mitigate damage resulting from forest management activities through open communication and negotiation prior to legal action.	The auditors are convinced that throughout the organization, DNR personnel manifest a commitment to open dialogue, discussion and negotiation as a means of avoiding intractable stakeholder problems. DNR personnel, for instance, have invested considerable time in interacting with key/active members of the environmental community—both in office meetings and in the field.	
4.5.b. Forest owners or managers and their contractors have adequate liability insurance.	Liability requirements are a standard contract specification.	

Importance Weighted Aggregate Score for Principle 4:

Applying the weights of relative importance for the 6 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #4 <i>Community Relations and Worker's Rights</i>	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
4.1	.25	93	86.4
4.2	.25	83	
4.3	.11	89	
4.4	.22	82	
4.5	.17	86	

Rounding to the nearest integer, the weighted average score for this Principle is:

87

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Corrective Action Requests and/or Recommendations:

Observation: In the judgment of the audit team, there are is not sufficient direction to field staff

for assuring identification of archeological/cultural/historic sites of importance; even more so, there is no established guidance for assuring that any such sites found during field work are properly reported to the SHPO.	
CAR 2005.4	Develop and implement direction/protocols to DNR field personnel on the identification of sites of archeological, cultural, historic or community importance and the procedurally appropriate means for reporting such sites to the SHPO.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 4.4(b)</i>

Background/Justification: Despite the existence of a multiplicity of mechanisms by which stakeholders can have their input received by DNR managers and can participate in planning and decision-making processes, stakeholders from across the spectrum expressed to the auditors a sense that DNR is not being adequately transparent. While such frustrations may in part be triggered more from dissatisfaction over the results of the planning and decision-making processes than from inadequacies in the stakeholder input/participation mechanisms, this rather widespread perception is something that DNR ought to try to address.	
REC 2005.4	DNR should develop a strategy for comprehensively reviewing its stakeholder input/participation mechanisms in order to identify and implement opportunities for improving overall stakeholder satisfaction with DNR's efforts at transparency.
Reference	<i>FSC Indicator 4.4.e</i>

1.5 PRINCIPLE #5: BENEFITS FROM THE FOREST

Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

This FSC Principle addresses several loosely related issues such as efficiency in the use of forest products, financial viability of the forest management operation, and diversity of environmental and social benefits from forest management. Principle 5 is elaborated through 6 Criteria. Of note, Criterion 5.6 requires that the rate of harvest not exceed levels that can be permanently sustained, perhaps one of the most focused and specific requirements found throughout the P&C. The other 5 Criteria within this principle address matters such as balancing financial objectives with full cost accounting (including environmental costs), optimal use of harvested products and local processing, minimization of waste and residual stand damage, diversification of products from the forest, and protection of forest services such as watershed functions and fisheries values.

Standard	Score	Comments
C5.1. Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.	83	The audit team has determined there is marginal conformance with this Criterion.
5.1.a. The forest owner or manager is willing and able to support long-term forest management (i.e., decades rather than quarter-years or years), such as planning, inventory, resource protection, and post-harvest management activities.		Beyond question, DNR is a long-term manager of this forest estate, which stands in favorable contrast to more and more industrial land holdings in the U.S. and around the globe. DNR's collective investment in planning, inventory, resource protection and management operations is extensive and strongly indicative of a long-term commitment.
5.1.b. Responses (such as increases in harvests or debt load) to short-term financial factors (such as market fluctuations and sawmill supply requirements) are limited to levels that enable fulfillment of the management plan.		Timber harvests on the state forests are not subject to significant short term fluctuations due to financial exigencies; harvest levels do not exceed planned levels. The Red Pine Project is a forward looking planning effort and document that attempts to address some economic and output issues.
5.1.c. Investment and/or reinvestment in forest management are sufficient to fulfill management objectives and maintain		While overall investment in the administration of the state forests is considerable, the growing demands on public use management are now

and/or restore forest health and productivity.	<p>exceeding the current commitment of resources (people, budgets). See CAR 2005.2.</p> <p>There are numerous unfilled/vacant positions in each of the departments resource management divisions (FMFM, Wildlife, Fisheries)</p>	
C5.2. Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.	86	The audit team has determined there is clear overall conformance with this Criterion.
5.2.a. Opportunities are given to local, financially competitive, value-added processing and manufacturing facilities.	<p>While DNR does not have a policy or program designed to provide preference for local processing and manufacturing facilities, the fact is that most wood is purchased by local/regionally based contractors who, in turn, sell the harvested logs to processing facilities within Michigan or northern Wisconsin. Thus, on a de fact basis, there are clearly opportunities available to local value-added processing and manufacturing facilities.</p> <p>In terms of the language of the criterion, itself, the auditors conclude that wood harvested from the state forests does, generally, find its way to the highest-value uses. There is no evidence, for instance, of any significant instances where sawlog quality logs are ending up in pulp mills or veneer quality logs are ending up in a sawmill.</p>	
5.2.b. When non-timber products are harvested, the management and use of those products is incorporated into the management plan.	<p>While there is not an extensive amount of non-timber product extraction from the state forestlands, activities that would logically fall under this category are covered by some sort of permit, e.g.: blueberry burns covered by a Forest Treatment Proposal (FTP), dispersed recreation requires permits, fuel wood removal requires permits.</p> <p>It is our sense that these and similar non-timber extractive uses could be more prominently addressed in the appropriate management planning documents. See recommendation, below.</p>	
5.2.c. New markets are explored for products from common but underutilized forest species.	<p>This does not appear to be an area receiving an extensive amount of attention within the FMFM staff. However, there is a utilization and merchandizing staff position that does represent a positive response to this indicator.</p>	
C5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.	86	The audit team has determined there is clear overall conformance with this Criterion.
5.3.a. Adequate quantities and a diversity of size classes of woody debris (considered a reinvestment of biological capital under this criterion—not an economic waste) are left on the forest floor to maintain ecosystem functions, wildlife habitats, and future forest productivity.	<p>DNR field managers are cognizant of the ecological importance of large wood debris in forest ecosystems. While more emphasis could be placed on this issue, the auditors generally found adequate conformance to this indicator.</p> <p>See recommendation, below.</p>	
5.3.b. The loss and/or waste of merchantable forest products is minimized.	<p>The auditors observed good overall conformance to this indicator; that is, there was very little evidence of resource wastage.</p>	
5.3.c. Harvest practices minimize residual stand damage.	<p>Generally, field visits revealed that residual stand damage after harvesting is within acceptable limits.</p> <p>DNR assesses “triple damages” and has other timber sale contract specs that clearly encourage contractors to minimize resource damage.</p>	
C5.4. Forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product.	93	The audit team has determined there is outstanding overall conformance with this Criterion.
5.4.a. Forest management diversifies forest uses and products, while maintaining forest composition, structures, and functions.	<p>Considering DNR’s fundamental orientation and effort to manage for outdoor recreation, the production of timber products, wildlife habitat, watershed and river system health, biodiversity including old forest attributes, we consider the level of conformance to this indicator to be exemplary.</p> <p>In response to the certification gap analysis reports submitted in late 2004, DNR developed a new Work Instructions relevant to this indicator:</p>	

		<ul style="list-style-type: none"> 6.2: Integrating Public Recreational Opportunities with Management on State Forest Lands
C5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.	92	The Lake States Regional Working Group did not specify any regional indicators for this criterion. However, it is our judgment that DNR’s management policies and approaches to the administration of the Michigan state forests are, in fact, driven by a recognition and balancing of the forest services and resources that are found on the forest estate and that are valued by the citizens of Michigan. DNR clearly is responding to its perceived mandate to manage for the full suite of services and resources rather than merely managing to maximize revenue generation, for instance.
C5.6. The rate of harvest of forest products shall not exceed levels that can be permanently sustained.	88	The audit team has determined there is clear overall conformance with this Criterion.
5.6.a. The sustainability of harvest levels is based on growth and regeneration data, site index models, soil classification, and/or desired future conditions. The required level of documentation is determined by the scale and intensity of the operation.		<p>Data and supporting evidence indicates that average annual harvest levels on the Michigan state forests are below average annual growth; harvests are set at levels that reflect an appropriate balancing of a suite of competing uses and considerations applying to this important state-owned resource.</p> <p>The DNR, beginning in 1998, conducted a focused Silvicultural Analysis in response to legislated-mandated harvest level targets (approximately 850,000 cords per year). This Silvicultural Analysis, in turn, underwent an external review.</p> <p>A Harvest Trends Report, authored by Dr. Pedersen, was prepared by DNR prior to the certification audit. This report addresses harvest levels and the effects of “factor limits.”</p> <p>On the other hand, an explicit effort to quantitatively assess “sustainability” (i.e., to quantitatively determine a maximum long term sustained yield level) has not been undertaken. (See recommendation, below)</p> <p>There is ample documentation regarding growth and regeneration, soils, and desired future conditions.</p>
5.6.b. After the species composition and the age-class (see Glossary) distribution commensurate with long-term sustainability have been achieved, harvest and growth records demonstrate that the volume harvested during any 10-year span is less than the net growth accumulated over that same period. Exceptions to this constraint may be granted to forest owners or managers whose periodic cycle of re-entry is longer than 10 years. In such cases, allowable harvest is determined by examining the volume of re-growth and removal since the previous harvest and the forest owner or manager’s commitment to allow an equivalent amount of re-growth before additional harvests.		<p>As written, this indicator is not applicable since the age class distributions on the state forests have not achieved a “regulated” condition, in the classic forestry sense of that term.</p> <p>Harvests levels, in any single year or averaged over several years, do not exceed periodic increment.</p> <p>The forest products industry in Michigan would very much like to see higher harvest levels on the state forests, but from the standpoint of demonstrating solid conformance with the breadth of requirements found in the FSC certification standards, it is our judgment that a substantial increase in harvest levels would be problematic.</p>
5.6.c. If rates of harvest are temporarily accelerated to compensate for or prevent unacceptable mortality, or in cases of salvage operations (see Indicator 6.3.c.4), the rate of future harvest is recalculated accordingly to meet desired future conditions, and the adjusted rate of harvest is implemented within three years of the temporary acceleration.		<p>There is not a pattern on the state forests of significant accelerations in harvest rates in response to mortality. Overall, DNR is not engaged in timber management at the “intensive boundary.”</p> <p>MDNR uses “area regulation” as a means to sustain harvest levels. Silvicultural guidelines and entry-periods were reviewed and in circumstances where out- of- year-of-entry (YOE) harvests are conducted, fewer acres are prescribed in that YOE. Another method used to break-up age classes or consolidate areas that cross compartment boundaries is to change YOE for several compartments to facilitate management objectives.</p>

Importance Weighted Aggregate Score for Principle 5:

Applying the weights of relative importance for the 6 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #5 <i>Benefits from the Forest</i>	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
5.1	.21	83	87.9
5.2	.11	86	
5.3	.07	86	
5.4	.11	93	
5.5	.20	92	
5.6	.30	88	

Rounding to the nearest integer, the weighted average score for this Principle is:

88

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Recommendations:

Background/Justification: While non-timber product utilization is not a widespread activity on the Michigan state forests, some products are nevertheless harvested/removed such as blueberries, fuel wood, mushrooms. Such activities are covered by some form of permit issued by DNR but it is our sense that non-timber products do not receive as much attention in the DNR’s planning documents as would be ideal	
REC 2005.5	DNR personnel should consider incorporating, more explicitly, non-timber product extraction in planning documents such as the eco-regional plans.
Reference	FSC Criterion 5.2

Background/Justification: During field reconnaissance, the auditors observed that efforts to retain/recruit large woody debris in harvest units are variable across FMUs.	
REC 2005.6	DNR personnel should explore options for increasing efforts at large woody debris retention in harvest units
Reference	FSC Criterion 5.3

Background/Justification: An explicit effort to quantitatively assess “sustainability” (i.e., to quantitatively determine a maximum long term sustained yield level) has not been undertaken.	
REC 2005.7	It is recommended that DNR explore opportunities, perhaps as part of the eco-regional planning process, to complete a mid-spatial scale quantitative sustainability analysis of timber harvest levels. This analysis should use limiting factors and/or other considerations to quantitatively confirm whether harvest levels on the state forests are sustainable.
Reference	FSC Criterion 5.6

1.6 PRINCIPLE #6: ENVIRONMENTAL IMPACT

Forest Management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest

This FSC Principle is elaborated by a set of 10 Criteria that focus on issues such as impact assessments,

protection of listed species, biodiversity, reserve areas, streamside and wetlands buffers, erosion control, exotic species, chemical use, high conservation value forests, and forest conversions. Of all the FSC Principles, this one is the most expansive in scope, with an associated high level of emphasis on data and information collection and analysis. Collectively, the thrust of this principle encourages the maintenance and restoration of natural forest conditions.

Standard	Score	Comments
<p>C6.1. Assessments of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.</p>	83	<p>The audit team has determined there is marginal overall conformance with this Criterion.</p>
<p>6.1.a. Using credible scientific analyses and local expertise, an assessment of current conditions is completed to include:</p> <ul style="list-style-type: none"> • Disturbance regimes and successional pathways; • Unique, vulnerable, rare, and threatened communities; • Common plants, animals, and their habitats; • Sensitive, threatened, and endangered species and their habitats; • Water resources; and • Soil resources (see also Indicators 7.1.a and b). 		<p>Foresters and wildlife biologists are generally aware of disturbance regimes and successional pathways, as evidenced by management prescriptions, forest plans, and special initiatives (e.g., red pine project).</p> <p>Kotar habitat classification is used commonly, an indication that managers consider disturbance regimes, soil characteristics, and appropriate plants and animals for compartment planning.</p> <p>Assessment of wildlife species potentially affected by management is assured by integration of wildlife biologists in land management planning and operations. Fisheries biologists are routinely involved in compartment reviews, reflecting the importance of water resources in forest harvest planning. MNFI personnel have opportunity to comment as part of process for compartment reviews, assuring consideration of rare natural communities.</p> <p>MIWILD database used to assess potential effects of habitat management on a wide array of wildlife species, but in some instances this database is used indiscriminately (garbage-in/garbage-out assessment).</p> <p>Considerable diversity was noted in assessments of wildlife, consideration of disturbance regimes, and site conditions among FMUs. Wildlife assessments often reflected simple observations (“moose was observed in this stand”) or routine biases toward featured species (“this stand good for grouse”); but other assessments were thorough and comprehensive.</p> <p>Inconsistent practice of recording observations of rare species or communities and passing relevant information on to MNFI or others (IFMAP seeks to correct this weakness).</p>
<p>6.1.b. Using available science and local expertise, the current ecological conditions are compared to both the historical conditions and desired future conditions within the landscape context. This comparison is done by employing the baseline factors identified in 6.1.a.</p>		<p>Operations Inventory Manual specifies assessment of current ecological conditions.</p> <p>Circa 1800 data are available to approximate historical conditions, as are digital maps of disturbance regimes, and abundant evidence was collected during the field audit that many foresters and biologists use this resource and other information to assess historic conditions in forest planning (e.g., compartment reviews, red pine project).</p> <p>Lack of consistent planning scale and large gaps in plans for state forest lands means that desired future conditions have not been formulated routinely.</p>
<p>6.1.c. Prior to the commencement of management activities, potential short-term environmental impacts and their cumulative effects are evaluated.</p>		<p>Act 451, Natural Resources and Environmental Protection Act, states “It is the goal of this state to conserve the lasting conservation of biological diversity.”</p>

	<p>FMFM Procedure 251, Sale and Removals of Timber, outlines factors that must be considered when establishing a timber removal prescription: aesthetics, zones of influence, erosion and water quality protection, adjacent ownership, fire hazard, and safety.”</p> <p>OI Handbook, Chapter 7 details the involvement of MNFI, MDEQ, and MSHPO in review of proposed treatments.</p> <p>Evidence accumulated during field and office audits indicates that required procedures are followed routinely for review of prescriptions at the compartment level.</p> <p>Where fire is prescribed, Forest Treatment Proposals and Burn Plans are required and must be reviewed by FMFM fire specialists.</p>	
<p>6.1.d. Using assessments derived from the above information, management options are developed and implemented to achieve the long-term desired future conditions and ecological functions of the forest (see also Criterion 7.1).</p>	<p>Where forest plans are available (e.g., Escanaba State Forest), future conditions are clearly articulated, based on ecological functions of the forest and recent assessments of current conditions, and similar processes are evident in initiatives such as the red pine project and the mesic conifer project.</p> <p>However, management options based on such assessments are patchy in space and time, and eco-regional planning has been progressing slowly and inconsistently.</p>	
<p>C 6.2. Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping, and collecting shall be controlled.</p>	<p>89</p>	<p>The audit team has determined there is clear overall conformance with this Criterion.</p>
<p>6.2.a. Although species that are state and/or Federally listed as threatened, endangered, of special concern, or sensitive, and their habitats are identified, their specific locations remain confidential.</p>	<p>This is the agreed-upon policy of DNR and MNFI, and numerous responses to questions about this policy during the field audit confirmed that it is widely understood and practiced.</p>	
<p>6.2.b. If scientific data indicate the likely presence of state and/or Federally listed as threatened, endangered, of special concern, or sensitive populations, either new surveys are carried out before field-management activities begin or the forest owner or manager assumes their presence and makes appropriate modifications in forest management.</p>	<p>Act 451, Part 365 provides protection for endangered and threatened species of plants and animals.</p> <p>MNFI ecologists routinely comment on compartment reviews and FTP’s; where there is uncertainty about occurrence of a protected species, new field surveys are carried out. Questions during the field audit confirmed universal conformance with this practice.</p>	
<p>6.2.c. For management planning purposes, forest owners or managers of publicly owned and large privately owned forests use, participate in, or carry out on-the-ground assessments for the occurrence of state and/or Federally listed as threatened, endangered, of special concern, or sensitive species.</p>	<p>Act 451, Part 365 requires DNR to conduct investigations of endangered and threatened species.</p> <p>Numerous surveys are conducted to monitor populations of threatened wildlife species, e.g., Kirtland’s warblers, bald eagles, gray wolves, trumpeter swans, and pine martens.</p> <p>DNR often contracts with MNFI to conduct surveys for other species. In recent years, such surveys have included Karner blue butterfly, massasauga, copperbelly watersnake, Hine’s emerald watersnake, red-shouldered hawk, and Hall’s bulrush.</p> <p>Fisheries Division conducts annual stream classification surveys, which include information on faunal assemblages.</p> <p>The recently completed Wildlife Action Plan (previously known as the Wildlife Conservation Strategy) provides guidance for monitoring of a</p>	

	<p>long list of species meriting conservation efforts.</p> <p>Several stakeholders commented that resources for field assessments of rare or threatened species, especially plants, have declined in recent years, and that more such surveys are needed.</p>	
<p>6.2.d. Where they have been identified, state and/or Federally listed as threatened, endangered, of special concern, or sensitive species and their habitats are maintained and/or restored. Multiple-use management activities are acceptable, where the law allows, in these species' habitat areas to the extent that they are compatible with maintenance and restoration of the species.</p>	<p>Part 525 of Act 451 stipulates that management shall address stand- and landscape-level measures that promote conservation of forest plants and animals....and that areas of ecological significance be managed in a manner that recognizes that significance.</p> <p>Thousands of acres are being managed for jack pine, with a primary objective of providing habitat for the endangered Kirtland's warbler, but fiber production is also an objective.</p> <p>Field visit to Ryerse Lake (Naubinway Office of Sault St. Marie FMU) featured an example of a 5-chain buffer for harvesting established around a wetland site that contained a globally rare species, the Arctic Moore rush.</p> <p>A number of foresters pointed out examples where buffers during harvesting were established around nests of raptorial birds, especially red-shouldered hawks. Winter harvests have been prescribed to avoid potential mortality of massasauga, a rare rattlesnake.</p>	
<p>6.2.e. If a state and/or Federally listed as threatened, endangered, of special concern, or sensitive species is determined to be present, its location is reported to the manager of the species' database.</p>	<p>MNFI conducts periodic workshops for foresters and wildlife biologists that address identification and habitats for endangered species.</p> <p>Close working relationships and shared office space among foresters, wildlife and fisheries biologists, recreation specialists, and law enforcement personnel facilitate exchange of information about discoveries of rare species and submission of data for inclusion in the Biotics database.</p> <p>New work instructions have explicit instruction for handling information on rare species during the compartment review process.</p> <p>While a protocol for processing information on random discoveries of rare species outside of formal surveys or compartment inventories apparently exists and forms are available on the MNFI web site, the audit team did not observe evidence of the DNR using this protocol during the course of the field audits.</p>	
<p>C6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.</p>	<p>85⁸</p>	<p>The audit team has determined there is clear overall conformance with this Criterion.</p>
<p>C6.3.a. Forest regeneration and succession</p>		
<p>6.3.a.1. Forest owners or managers make management decisions using credible scientific information (e.g., site classification) and information on landscape patterns (e.g., land use/land cover, non-forest uses, habitat types); ecological characteristics of adjacent forested stands (e.g., age, productivity, health); species' requirements; and frequency, distribution, and intensity of natural disturbances.</p>	<p>There is ample evidence that all of these characteristics are considered when formulating management plans, and current guidance (Work Instructions 1.3) is quite explicit.</p> <p>Kotar Habitat Classification is used widely by foresters and wildlife biologists in formulating compartment-level management plans.</p> <p>Existing plans and guidelines (e.g., red pine project, Kirtland's warbler plan, mesic conifer guidelines, selected watershed assessments)</p>	

⁸ To generate a performance score for this criterion that is comprised of numerous sub-criteria, the audit team employed the following protocol: 1) each sub-criterion was assigned a score on the basis of the team's assessment of conformance to the indicators associated with each sub-criterion. 2) a simple arithmetic (un-weighted) average score was computed for the entire criterion, rounding to the nearest integer.

	<p>incorporate analyses of landscape pattern, disturbance regimes, and site conditions.</p> <p>Such analysis and guidance does not exist for entire Districts, nor for the entire system of state forest lands. Eco-regional planning efforts are beginning to address this deficiency.</p>
6.3.a.2. Silvicultural practices encourage regeneration that moves the forest toward a desired future condition, consistent with information gathered in 6.3.a.1.	Subject to the deficiency mentioned above, desired future conditions usually are explicit in stand-level and landscape-level plans, and regeneration is monitored to assess conformance.
6.3.a.3. Measures are taken to ensure the retention of endemic and difficult-to-regenerate species.	<p>Efforts to match regeneration goal with site conditions were noted commonly in the field audit.</p> <p>Difficult-to-regenerate species are planted (e.g., hemlock, red pine)</p> <p>White cedar stands usually are not harvested because of difficulty in regenerating cedar.</p> <p>High deer populations in spots threaten regeneration of endemic species. In some instances, this has been addressed by issuing additional permits for harvest of antlerless deer.</p>
6.3.a.4. Across the forest, or the landscape in which it is located, management actions lead to a distribution of successional stages, age classes, and community types appropriate to the scale and intensity of the operation and desired future conditions.	The field audit provided an impression that these goals are being met rather well, but in an ad hoc manner based on a patchwork of plans, guidelines, and procedures for compartment exams. The eco-regional planning process will assure a more systematic approach across the landscape
6.3.a.5. When even-aged management (see Glossary) is employed, live trees and native vegetation are retained within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime in each community type (see Glossary). Exceptions may be allowed when retention at a lower level is necessary for purposes of forest restoration and/or rehabilitation or to maintain community types that exist on the site (e.g., oak-hickory, jack pine). The level of retention increases proportionally to the size of the harvest unit.	<p>Guidelines for retention of such habitat elements are found within (1) “The Compleat Marker: A Guide to Managing Northern Hardwoods on Michigan State Forests” (2) “Oaks, A Management Guide for Michigan’s State Forests,”; and “Guidelines for Managing Dead Wood to Enhance Biological Diversity on State Forest Lands,” April 1996.</p> <p>Field interviews with foresters and wildlife biologists confirmed familiarity with these guidelines and their implementation in the field. But, decisions on amount of and type of retention are made at the local level by many foresters and wildlife biologists, resulting in considerable inconsistency among FMUs.</p>
C6.3.b. Genetic, species, and ecosystem diversity	
6.3.b.1. Forest management conserves native plant and animal communities and species.	<p>Act 451, Part 525, requires the conservation of biological diversity.</p> <p>Circa 1800 data are used to reference historical conditions for tree species, and the Biotics database maintained by MNFI provides data on natural communities. These sources of information are used routinely in the compartment review process.</p> <p>A weak point is that better survey data for native species and communities, and progress on biodiversity conservation planning could improve conservation aspects of forest management.</p> <p>Compartment boundaries, if rectilinear in shape, result in lost opportunities to minimize ecological impacts of timber harvesting. (See REC)</p>
6.3.b.2. The forest owner or manager cooperates with local, state, and Federal agencies to protect and manage native plant and animal communities and species.	This is assured because DNR is the responsible state agency for cooperation with federal and local officials in the protection of native communities and species. Numerous statutes establish this responsibility.

<p>6.3.b.3. There is a consistent scientific method for selecting trees to plant, harvest and retain in order to preserve and/or enhance broad genetic and species diversity.</p>	<p>Kotar habitat classification is used throughout most districts to guide selection of “right species on right site.”</p> <p>Efforts are made to select seed for nursery stock to assure that trees are planted in the same general area where seed is collected. This was pointed out several times during the field audit, especially for jack pine, a genetically diverse species.</p> <p>Field inspections documented general practices of leaving “character” trees in thinning and selection harvests, islands of representative trees in clearcuts, and a variety of trees to represent structural and genetic diversity. Such practices were not consistent throughout the FMUs sampled, however.</p> <p>Contractors and new employees are trained, in annual sessions, about the concepts of diversity and retention.</p>
<p>6.3.b.4. Forest owners or managers maximize habitat connectivity to the extent possible at the landscape level (e.g., through an ecological classification system, at the subsection or land-type association level).</p>	<p>Plans for watershed conservation, including Natural Rivers, illustrate these concepts, but there is a general lack of planning for landscape connectivity in the absence of more progress on eco-regional and biodiversity conservation planning.</p>
<p>C6.3.c. Natural cycles that affect the productivity of the forest ecosystem</p>	
<p>6.3.c.1. Biological legacies of the forest community are retained at the forest and stand levels, consistent with the objectives of the management plan, including but not limited to: large live and declining trees, coarse dead wood, logs, snags, den trees, and soil organic matter.</p>	<p>Guidelines for retention of such habitat elements are found within (1) “The Compleat Marker: A Guide to Managing Northern Hardwoods on Michigan State Forests”; (2) “Oaks, A Management Guide for Michigan’s State Forests”; and “Guidelines for Managing Dead Wood to Enhance Biological Diversity on State Forest Lands,” April 1996.</p> <p>Field interviews with foresters and wildlife biologists confirmed familiarity with these guidelines and their implementation in the field, as did field inspections.</p>
<p>6.3.c.2. Forest management practices maintain soil fertility and organic matter, especially in the A horizon, while minimizing soil erosion and compaction. If degradation of soil quality occurs, as indicated by declining fertility or forest health, forest owners or managers modify soil management techniques.</p>	<p>Soil erosion from forest stands is effectively prevented by complying with BMPs.</p> <p>Whole tree chipping is not a widespread practice, and slash from harvesting is often spread around the site. Adequate woody debris was obvious on most harvest sites sampled.</p> <p>Two sites sampled during field audit illustrated excessive disruption of soil and regeneration by processing equipment in northern hardwood stands. More awareness of potential for soil compaction with such practices would be appropriate.</p>
<p>6.3.c.3. Forest management practices maintain or restore aquatic ecosystems, wetlands (including peatlands, bogs, and vernal pools), and forested riparian areas (see also Criterion 6.5).</p>	<p>“Water Quality Management Practices on Forest Land,” contains BMP guidelines, which are taught regularly to DNR employers and contractors. Guidelines appear to be followed regularly in forest management operations, although heavy ORV use often results in BMP violations.</p> <p>Review of harvest prescriptions by fisheries biologists, detailed specification in harvesting contracts, and DEQ permit requirements for culverts and bridges appear to be effective in protecting aquatic systems.</p>
<p>6.3.c.4. Responses (such as salvage) to catastrophic events (such as wildfire, blowdown, and epidemics) are limited by ecological constraints.</p>	<p>Policies exist for salvage harvesting, with review required by wildlife biologists, but there is no comprehensive guidance by regional plans or landscape-level objectives.</p>

C6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.	80 ⁹	The audit team has determined there is marginal overall conformance with this Criterion.
6.4.a. Where existing protected areas within the landscape are not of a size and configuration to serve the purposes listed in the above Applicability Note, forest owners or managers, whose properties are conducive to the establishment of such ecologically viable areas, designate them. The size, extent, and arrangement of on-site and off-site (i.e., on and off of the certified forest) representative sample areas are designated, documented, and justified.		A substantial network of Natural Areas does exist on state forest lands, and there are other protected areas off site (USFS, TNC, various lands trusts), but the size and configuration of these areas has not been thoroughly evaluated against the underlying expectations of this criterion.
6.4.b. Large private and public forest owners or managers use or carry out an analysis to evaluate the extent to which representative samples of existing ecosystems are adequately protected in the landscape. The size and extent of representative samples on public lands are determined through a management planning process that includes public input (see also Indicator 4.4.e).		<p>Previous efforts have bogged down, notably the Strategic Plan for Natural Areas Program and Proposed Old Growth and Biodiversity Stewardship Planning Process.</p> <p>The Biodiversity Conservation Planning Process (adopted June 2005) has outlined and initiated a suitable management planning process, but results of this process are still yet to unfold.</p> <p>The new biodiversity conservation area system that includes Ecological Reference Areas (ERAs) is directly responsive to this Criterion. The creation of a system of ERAs substantively helps to offset the adverse implications of the dormant nature of the Natural Areas Program.</p>
6.4.c. The process and rationale used to determine the size and extent of representative samples are described in the public summary of the certificate.		
6.4.d. Where areas are under-represented in which natural disturbance may occur unconstrained, large, contiguous public forests (see Glossary) create and maintain representative system of protected areas to accommodate such acts of nature.		Some such areas do occur, such as Kirtland’s warbler management areas and the Porcupine Mountains Natural Area, but the process mentioned in 6.4.b will need to progress before conformance can be adequately assessed.
C6.5. Written guidelines shall be prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.	88 ¹⁰	The audit team has determined there is clear overall conformance with this Criterion.
6.5.a. A set of forestry best management practices (BMPs), approved by the state forestry agency or otherwise appropriate jurisdiction (e.g., BIA), that address water quality and soil erosion is adhered to (see also 1.1.b). These guidelines may include provisions on riparian management zones (RMZs), skidding, access roads, site preparation, log landings, stream crossings, disturbance of sensitive sites, and wetlands.		Such guidelines do exist and were found routinely during visits to FMU offices: “DNR/DEQ Water Quality Management Practices on Forest Land.” Additional DNR guidelines exist for management in riparian zones
6.5.b. At a minimum, implementation of BMPs and other resource protection measures will result in the following:		
Logging and Site Preparation Logging operations and construction of roads and skid trails are conducted only during periods of weather when soil is least susceptible to compaction, surface erosion, or sediment transport into streams and other bodies of water.		<p>Policies and guidelines exist to support common requirements in contracts for logging that address seasonal harvesting and other procedures to prevent rutting and damage to soil and water.</p> <p>Most contractors have had SFE training.</p>

⁹ Initially, the audit team assigned a score for this criterion in the “marginally non-conforming” range. But with DNR’s submittal, on December 19th, of the biodiversity conservation planning document that elaborated upon the three-tiered network of conservation areas that include, at the highest level of conservation, Ecological Reference Areas, the audit team concluded that a change of score to 80 points was warranted.

¹⁰ To generate a performance score for this criterion that is comprised of numerous sub-criteria, the audit team employed the following protocol: 1) each sub-criterion was assigned a score on the basis of the team’s assessment of conformance to the indicators associated with each sub-criterion. 2) a simple arithmetic (un-weighted) average score was computed for the entire criterion, rounding to the nearest integer.

Logging damage to regeneration and residual trees is minimized during harvest operations.	Specifications in timber sales contracts define unacceptable damage to tree boles, roots, and regeneration, and impose penalties for violations. Contractors appear to comply well with these specifications.
Silvicultural techniques and logging equipment vary with slope, erosion hazard rating, and/or soil instability with the goal of minimizing soil disturbance. Areas that exhibit an extreme risk of landslide are excluded from management activities that may precipitate landslides.	Compartment review process includes interdisciplinary reviews that assure harvesting does not occur on unsuitable sites
Plans for site preparation specify the following mitigations to minimize impacts to the forest resources: 1) Slash is concentrated only as much as necessary to achieve the goals of site preparation and the reduction of fuels to moderate or low levels of fire hazard. 2) Top soil disturbance and scarification of soils is limited to the minimum necessary to achieve successful regeneration of desired species.	Guidelines for slash disposal may be lacking, but practices in the field generally were acceptable. Timber sale administration guidelines and silvicultural guides address soil scarification.
<u>Transportation System (including permanent and temporary haul roads, skid trails, and landings)</u> The transportation system is designed, constructed, maintained, and/or reconstructed to minimize the extent of the road network and its potential cumulative adverse effects.	Although existing roads generally are maintained in adequate condition, and numerous policies address the ecological impacts of roads, the system of roads on state forest lands is not adequately planned and designed. The Pigeon River Country State Forest has a road access plan, and the Eco-Team for the NLP has addressed the issue.
Access to temporary and permanent roads is controlled to minimize significant adverse impacts to soil and biota while allowing legitimate access, as addressed by Principles 3 and 4 and identified in the management plan.	Recent policy allows more efficient closing of roads when needed, and road closings are being pursued commonly to avoid damage to soil, water, and wildlife.
Failed drainage structures or other areas of active erosion caused by roads and skid trails are identified, and measures are taken to correct the drainage problems and stabilize erosion.	A new system of reporting failed or flawed structures and instances of erosion is in place, but funding for maintenance of roads and bridges has deteriorated in recent years, threatening adequate maintenance.
<u>Stream and Water Quality Protection</u> Stream crossings are located and constructed in a way that minimizes fragmentation of aquatic habitat (see Glossary) and protects water quality.	DNR policy addresses this indicator and is implemented by foresters trained in BMPs, an Environmental Forester in Lansing, and fisheries biologists in each district.
<u>Visual and Aesthetic Considerations</u> Forest owners or managers limit and/or reduce negative impacts on visual quality caused by forest management operations.	DNR policy does address aesthetics associated with forest operations, and a specific Visual Management Checklist is supposed to be used on all timber sales. Foresters were universally aware of these guidelines.
C6.6. Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.	93 The audit team has determined there is outstanding overall conformance with this Criterion.
6.6.a. Forest owners and managers demonstrate compliance with FSC Policy paper: "Chemical Pesticides in Certified Forests, Interpretation of the FSC Principles and Criteria, July 2002" (available at http://www.fsc.org/en/whats_new/documents/Docs_cent/2) and comply with prohibitions and/or restrictions on World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic	Several examples of IPM were noted during the field audit, e.g., seasonal harvesting of oak to combat oak wilt, avoiding jack pine budworm by harvesting mature stands, and planting species suited to site conditions. New work instructions provide detailed guidance and a listing of currently approved pesticides that comply with FSC requirements.

or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement.		
6.6.b. Forest owners or managers employ silvicultural systems, integrated pest management, and strategies for controlling vegetation that minimize negative environmental effects. Non-chemical techniques are preferred in the implementation of these strategies.		Numerous policies and directives address this indicator: using prescribed burns to mimic natural disturbances, planting species appropriate to site conditions (as determined by use of Kotar classification system), and planting with seed collected from nearby sources.
6.6.c. Forest owners or managers develop written strategies for the control of pests as a component of the management plan (see Criterion 7.1).		Pesticides are used sparingly and only after a written FTP that is approved by a Unit Manager and district wildlife biologist. A follow-up report is required to assess the efficacy of the treatment. Some districts are more inclined to use approved chemicals than others.
6.6.d. If chemicals are applied, the most environmentally safe and efficacious chemicals are used. Chemicals are narrowly targeted, and minimize effects on non-target species.		DNR Policy 591 addresses this issue. Training on pest management is offered to FMFM foresters, and three forest health specialists are available to assist with management planning and compartment reviews.
6.6.e. Chemicals are used only where they pose no threat to supplies of domestic water, aquatic habitats, or Rare species or plant community types.		This is consistent with DNR policy. Reviews of FTPs by aquatic biologists and community ecologists with MNFI should assure conformance with policy.
6.6.f. If chemicals are used, a written prescription is prepared that describes the risks and benefits of their use and the precautions that workers will employ.		This is a standard part of an FTP that recommends use of pesticides.
6.6.g. If chemicals are used, the effects are monitored and the results are used for adaptive management. Records are kept of pest occurrences, control measures, and incidences of worker exposure to chemicals.		Current procedures require written prescriptions and assessments, and records of pesticide applications were promptly retrieved when requested by auditors. .
C6.7. Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.	87	The audit team has determined there is clear overall conformance with this Criterion.
6.7.a. In the event of a spill of hazardous material, forest owners or managers immediately contain the material, report the spill as required by applicable regulations, and engage qualified personnel to perform the appropriate removal and remediation.		State law, Act 451, and DNR policy addresses spills from equipment being used in the forest, and numerous enforcement personnel are expected to report spills. Spill kits were noted frequently in vehicles driven by FMFM foresters and at sites where contractors were working.
6.7.b. Waste lubricants, anti-freeze, containers, and related trash are stored in a leakproof container until they are transported to an approved off-site disposal site.		Inspections in garages of unit offices and in the forest confirm that appropriate practices are being followed.
6.7.c. Broken or leaking equipment and parts are repaired or removed from the forest.		With one exception, inspections of harvesting equipment in the field indicated that contractors were complying with this standard.
6.7.d. Equipment is parked away from riparian management zones, sinkholes, or supplies of ground water.		Standards are specified in guidelines for timber sale administration and appear to be followed routinely in the field. No instances of equipment being parked in inappropriate places were noted.
C6.8. Use of biological control agents shall be documented, minimized, monitored, and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.	90	The audit team has determined there is outstanding overall conformance with this Criterion.
6.8.a. Exotic (i.e., non-indigenous), non-invasive predators or biological control agents are used only as part of a pest management strategy for the control of exotic species of plants, pathogens (see Glossary), insects, or other animals when other pest control methods are, or can reasonably be expected to prove, ineffective. Such use is contingent upon		Biological control agents have been used on state forest lands for control or experimental control of gypsy moths, spotted knapweed, and purple loosestrife, but close review and supervision is provided through DNR forest health specialists in cooperation with USDA/ APHIS, Michigan Department of Agriculture, university researchers, and USDA Forest Service. No GMOs have been used by DNR or are being contemplated

peer-reviewed scientific evidence that the agents in question are non-invasive and are safe for indigenous species because, for example, exotic species can host pathogens that might diminish biodiversity in the forest.	for use.	
C6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.	90	The audit team has determined there is outstanding overall conformance with this Criterion.
6.9.a. Except on plantation sites (see also Criterion 10.4), the use of exotic tree species is permitted only in the first successional stages or other short-term stages for the purposes of restoring degraded ecosystems.	Exotic tree species are not being planted, and the few plantations of Scotch pine are being converted to native species. A position statement on Native Plants in Resource Management has been approved.	
6.9.b. The use of exotic species (see Glossary) is contingent on peer-reviewed scientific evidence that the species in question is non-invasive and will not diminish biodiversity. If non-invasive exotic species are used, the provenance and location of use are documented, and their ecological effects are actively monitored.	With the exception of grass seed, exotic species are not being used. With some exceptions, native grasses are selected for seeding when correcting or preventing erosion. The same standards are imposed on gas and oil companies for revegetation of well sites.	
6.9.c. Written documentation is maintained for the use of exotic species.	Because exotic species are not being planted, this applies only to selected bio-control agents (see 6.8.a).	
6.9.d. Forest owners or managers develop and implement control measures for invasive exotic species.	A number of examples of conformance were observed: efforts to control purple loosestrife, spotted knapweed, garlic mustard, glossy buckthorn, emerald ash borer. Autumn olive has been planted in the past by the Wildlife Division, but there is no plan for control.	
6.10. Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion: a) Entails a very limited portion of the forest management unit; and b) Does not occur on High Conservation Value Forest areas; and c) Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.	88	The audit team has determined there is clear overall conformance with this Criterion.
6.10.a. Over the life of the ownership, forest to non-forest conversions are limited to the threshold of 1% of the forest area or 100 acres, whichever is smaller, except that a parcel up to two acres in size may be converted for residential use by the forest owner or manager.	Conversions to non-forest use are minimal, but may push the 1% threshold (data not presented, see REC). However, some conversion is for the desirable purpose of creating wildlife openings. Conversion also is common for oil and gas extraction, and for pipeline rights-of-way.	
6.10.b. When private forest lands are sold, a portion of the proceeds of the sale is reinvested in additional forest lands and/or forest stewardship.	Not applicable.	

Importance Weighted Aggregate Score for Principle 6:

Applying the weights of relative importance for the 10 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #6 <i>Environmental Impact</i>	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
6.1	.15	83	
6.2	.11	89	
6.3	.18	85	
6.4	.10	80	
6.5	.07	88	
6.6	.09	93	

6.7	.04	87	87.5
6.8	.05	90	
6.9	.06	90	
6.10	.16	88	

Rounding to the nearest integer, the weighted average score for this Principle is:

88

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Corrective Action Requests:

Observation: The collaborative working relationship between DNR and MNFI may be hampered by the recent cutbacks in funding for MNFI survey work on the state forests; the underlying goal of that collaboration—to identify and protect notable natural features found within the state forest system—is further hampered by inadequate guidance to DNR field staff on identifying state and federally listed plant species.	
CAR 2005.5	<ul style="list-style-type: none"> a) Develop and pursue strategies to assure a renewed/enhanced effort to conduct field surveys and assessments for rare, threatened, and endangered species and communities on the Michigan state forestlands. b) Develop and implement direction/protocols to DNR field personnel designed to assure more systematic on-the-ground assessment of state and federally listed plant species c) submit to SCS, no later than 6 months after award of certification, a briefing document that details progress made on parts a) and b).
Deadline	6 months after award of certification
Reference	<i>FSC Criterion/Indicator 6.1(a) and 6.2(c)</i>

Observation: In the course of examining recent (YOE 2003 and 2004) regeneration harvests on 8 FMFM FMUs, the audit team observed a substantial variation—across units and across individual foresters—in the extent and manner in which green retention is laid out and implemented. Likewise, the audit team concludes that more emphasis needs to be placed on recognizing and appropriately managing areas possessing resources of limited distribution (e.g., Canadian yew) and/or heightened sensitivity (e.g., seeps, springs and wet areas). Furthermore, stakeholder comments and field observations indicate that high populations of ungulates might have detrimental effects on the diversity of understory plants and regeneration of valued forest trees.	
CAR 2005.6	<p>Develop and implement direction/protocols to DNR field personnel on:</p> <ul style="list-style-type: none"> a) the ecological bases for in-stand structural retention, particularly during regeneration harvesting, to assure more consistent uptake across all FMUs b) the identification and management of areas (as small as portions of individual stands) possessing notable ecological attributes, to assure more consistent uptake across all FMUs c) an assessment--throughout the ownership--of effects of browsing by ungulates.
Deadline	By the time of the special surveillance audit during the first quarter of 2006, (a) and (b); and by the first annual surveillance audit, (c).
Reference	<i>FSC Criterion/Indicator 6.3(a)3, 6.3(a)5, 6.3(b)1, 6.3(c)3</i>

Observation: On the basis of document reviews and DNR personnel discussions, the audit team is unable to confirm adequate conformance to the FSC Lake States Regional Standard requirement that “forest owners or managers maximize habitat connectivity to the extent possible at the landscape level.”	
CAR 2005.7	Within the OI/IFMAP and eco-regional planning processes, modify procedures as necessary to assure maximum practicable habitat connectivity.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006.
Reference	<i>FSC Criterion/Indicator 6.3(b)4</i>

Observation: The audit team notes that no additions to the Natural Areas Program have been made for over a decade, despite a substantial queue of nominated areas. The suspended status of this program was raised as a concern by a variety of stakeholder groups. Its suspended status is incompatible with exemplary performance relative to FSC Criterion 6.4.	
CAR 2005.8	Undertake necessary departmental actions to: a) re-establish active designations to the Natural Areas Program b) assure completion of the Biodiversity Conservation Committee’s Phase I analysis in time to provide substantive guidance in the development of the EUP eco-regional plan c) submit to SCS, no later than 6 months after award of certification, a briefing document that details progress made on parts a) and b).
Deadline	At the time of the 2006 surveillance audit.
Reference	<i>FSC Criterion/Indicator 6.4(a) and 6.4(b)</i>

Recommendations:

Background/Justification: The effects of deer browse are not adequately understood.	
REC 2005.8	With respect to part (c) of CAR 2005.6, it is recommended that DNR consult with Drs. Michael Walters and Riqua Campa at Michigan State University who have recently completed research on the Michigan ungulate herbivory
Reference	FSC Criterion 6.3.b.1

Background/Justification: Compartment boundaries that are rectilinear in shape or do not coincide with natural stand boundaries result in unnecessary adverse ecological effects as compared to compartments that follow natural stand patterns.	
REC 2005.9	As part of the OI/compartment review, DNR should assess the configuration of compartment boundaries and, if appropriate, modify boundaries to avoid rectilinear patterns.
Reference	FSC Criterion 6.3.b.1

Background/Justification: Two sites sampled during field audit illustrated excessive disruption of soil and regeneration by processing equipment in northern hardwood stands. In both cases, harvesting equipment moved extensively throughout the stand, instead of following a minimal network of cutting lanes. More awareness of potential for soil compaction with such practices would be appropriate.	
REC 2005.10	DNR foresters should engage in a structured discussion of the potential detrimental effects of soil compaction, root damage, and harm to understory plants than can result from harvesting equipment. The comparative environmental implications of dispersed skidding versus skidding on defined trails should be examined.
Reference	<i>FSC Criterion/Indicator 6.3.c.2</i>

Background/Justification: Data on conversion of state forestland to non-forest cover and uses	
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is not compiled and, as such, has not been made available to the auditors.	
REC 2005.11	As part of the IFMAP/OI process, data on forest conversions to non-forest cover and uses should be collected and compiled.
Reference	FSC Criterion 6.10

1.7 PRINCIPLE #7: MANAGEMENT PLAN

A management plan-appropriate to the scale and intensity of the operations-shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

This Principle is elaborated through 4 Criteria, which collectively call for a very high level of commitment to management planning.

Standard	Score	Comments
C7.1. The management plan and supporting documents shall provide: a) Management objectives. b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands. c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories. d) Rationale for rate of annual harvest and species selection. e) Provisions for monitoring of forest growth and dynamics. f) Environmental safeguards based on environmental assessments. g) Plans for the identification and protection of rare, threatened and endangered species. h) Maps describing the forest resource base including protected areas, planned management activities and land ownership. i) Description and justification of harvesting techniques and equipment to be used.	83 ¹¹	The audit team has determined there is marginal overall conformance with this Criterion.
7.1.a. Management objectives		
7.1.a.1. A written management plan is prepared that includes the landowner's short-term and long-term goals and objectives (ecological, social, and economic). The objectives are specific, achievable, and measurable.		<p>Planning processes exist at multiple spatial and temporal scales with the most developed being at the compartment level. Eco-regional plans have suffered from mis-starts and changing direction from headquarters but, with the new Work Instructions, now appears to be on track for completion within the next two years.</p> <p>The recently completed <i>Operational Management Guidance for State-Owned Forest Lands</i> provides a single-source document containing overall vision and mission statements as well as broad-scale management guidance.</p> <p>In response to the certification gap analysis reports submitted in late 2004, DNR developed 7 new Work Instructions, all under Work Area Group 1, relevant to this indicator:</p> <ul style="list-style-type: none"> • 1.1: Strategic Framework for Sustainable Management of State Forest Land

¹¹ To generate a performance score for this criterion that is comprised of numerous sub-criteria, the audit team employed the following protocol: 1) each sub-criterion was assigned a score on the basis of the team's assessment of conformance to the indicators associated with each sub-criterion. 2) a simple arithmetic (un-weighted) average score was computed for the entire criterion, rounding to the nearest integer.

	<ul style="list-style-type: none"> • 1.2: Management Review Process for Continual Improvement in the Management of Forest Resources • 1.3: Ecoregional Plan Development • 1.4: Biodiversity Management on State Forest Lands • 1.5: Social Impact Considerations and Public Involvement Processes • 1.6: Forest Management Unit Analyses • 1.7: State Forest Timber Harvest Trends <p>The auditors applaud both the development of these Work Instructions as well as the efforts already undertaken by DNR to train field staff in their use; at the same time, the auditors recognize the “newness” of these new procedures and that a track record of demonstrated compliance in the field has yet to be generated.</p> <p>Eco-regional planning teams include key members from all three resource divisions of the department; Division of Wildlife and Division Fisheries personnel serve as planning team leaders on some of the eco-regional teams. As such, there is a good assurance that there will be an effective integration and elaboration of ecological, social and economic goals and objectives.</p> <p>Eco-regional planning entails the elaboration of “criteria and indicators” that will constitute achievable and measurable metrics of plan objectives and the attainment of those objectives, over time.</p>
<p>7.1.a.2. The management plan describes desired future conditions that will meet the long-term goals and objectives and that determine the silvicultural system(s) and management activities to be used.</p>	<p>The eco-regional planning process expressly incorporates the concept of desired future condition.</p> <p>See Section 2 of <i>Operational Management Guidance for State-Owned Forest Lands</i> establishes a vision of desired future conditions for the state forests.</p>
<p>7.1.b. Description of forest resources to be managed, environmental limitations, land use and ownership status, socioeconomic conditions, and profile of adjacent lands</p>	
<p>7.1.b.1. The management plan describes the timber, fish and wildlife, harvested non-timber forest products, soils, and non-economic forest resources.</p>	<p>DNR, on its web site and in other publicly available documents, has generated an extensive body of documents that describe the timber, fish and wildlife, soils, recreational resources, aquatic and riparian resources, and non-economic forest resources such as biodiversity.</p>
<p>7.1.b.2. The management plan includes descriptions of special management areas; sensitive, rare, threatened, and endangered species and their habitats; and other ecologically sensitive features in the forest.</p>	<p>T&E species, their habitats and DNR management approaches are the subject of extensive planning processes and documents.</p> <p>Natural Areas, while dormant in recent years in terms of new additions, are established and managed pursuant to well-developed protocols and there is adequate documentation describing these areas. The new Work Instructions further elaborate on how Natural Areas fit into a large paradigm of management of areas of high conservation value.</p>
<p>7.1.b.3. The management plan includes a description of past land uses and incorporates this information into the vision, goals, and objectives.</p>	<p>As can be found on the DNR web site and in numerous publicly available documents produced by DNR, the historical use patterns on the land that now comprises the state forests is well understood and documented. The history of past resource exploitation clearly is a factor in the formulation of modern management policies and objectives for the state forests.</p>
<p>7.1.b.4. The management plan identifies the legal status of the forest and its resources (e.g., ownership, usufruct rights (see Glossary), treaty rights, easements, deed restrictions, and leasing arrangements).</p>	<p>As DNR is managing a forest estate that is unquestionably owned by the State of Michigan, the legal status is fundamentally not an issue. DNR maintains detailed records defining the boundaries of the state forests and records of easements, special use permits, treaty rights of the 12 federally recognized tribes in Michigan.</p> <p>Statewide authorities are presented in the new planning document, <i>Operational Management Guidance for State-Owned Forest Lands</i></p>
<p>7.1.b.5. The management plan identifies relevant cultural and socioeconomic issues (e.g., traditional and customary rights of use, access, recreational uses, and employment),</p>	<p>There appears to be marginal conformance to this indicator, at least in the context of written management plans. On the positive side, the compartment review process does systematically address archeological</p>

<p>conditions (e.g., composition of the workforce, stability of employment, and changes in forest ownership and tenure), and areas of special significance (e.g., ceremonial and archeological sites).</p>	<p>and historic sites, but identification of cultural or ceremonial sites of current or past tribal significance is not emphasized.</p>
<p>7.1.b.6. The management plan incorporates landscape-level considerations within the ownership and among adjacent and nearby lands, including major bodies of water, critical habitats, and riparian corridors shared with adjacent ownerships.</p>	<p>Even in the absence of completed eco-regional plans, there are landscape-level considerations incorporated into management actions and programs. But such integration will be much more effective with the development and implementation of the eco-regional plans. DNR management decisions do consider adjoining properties, particularly nearby national forest land.</p> <p>Overall, we cannot conclude that there is adequate conformance to this indicator that focuses on landscape-level considerations. It is critical that DNR complete the eco-regional plans at the earliest practicable time. See the corrective action request, below.</p>
<p>7.1.c. Description of silvicultural and/or other management system</p>	
<p>7.1.c.1. Silvicultural system(s) and prescriptions are based on the integration of ecological and economic characteristics (e.g., successional processes, soil characteristics, existing species composition and structures, desired future conditions, and market conditions). (see also sub-Criterion 6.3.a)</p>	<p>Both even and uneven-aged silvicultural systems are employed on the state forests with uneven-aged prescriptions being most prevalent on all forest types other than aspen and red pine planted stands. Silvicultural prescriptions result from an explicit consideration of pre-harvest stand conditions and desired future conditions.</p> <p>Quite clearly, silvicultural prescriptions employed on the state forests represent an integration of ecological, economic and social considerations; DNR is not engaged in maximum or optimum timber production at the expense of non-timber considerations.</p> <p>Field foresters demonstrate a good working knowledge of the silvicultural systems applicable to the forest types found on the state forests. There is a substantial variation in the approaches taken across FMUs which reflects an organizational orientation towards allowing professional judgment to play a key role in on-the-ground management decisions.</p>
<p>7.1.c.2. Prescriptions are prepared prior to harvesting, site preparation, pest control, burning, and planting and are available to people who implement the prescriptions.</p>	<p>All timber harvests as well as other site-disturbing activities are guided by a Forest Treatment Proposal, a written guidance document prepared in advance and subject to interdisciplinary review and modification in the compartment review process.</p>
<p>7.1.d. Rationale for the rate of annual harvest and species selection</p>	
<p>7.1.d.1. Calculations for the harvests of both timber and non-timber products are detailed or referenced in the management plan and are based on net growth, yield, stocking, and regeneration data. (see also 5.6.b)</p>	<p>Detailed and sophisticated timber harvest planning is undertaken for the state forests.</p> <p>The 10-year cycle for year-of-entry management of the state forest “matrix lands” constitutes a robust and time tested type of “area control.”</p> <p>Production targets are attainable.</p> <p>The OI process as well as periodic statewide forest inventories produce quantitative data on growth and yield, stocking and adequacy of regeneration.</p> <p>Non-timber forest products do not receive much attention in the planning process (see recommendation under Principle 5).</p>
<p>7.1.d.2. Species selection meets the social and economic goals and objectives of the forest owner or manager and leads to the desired future conditions while maintaining or improving the ecological composition, structures, and functions of the forest.</p>	<p>Only tree species native to the temperate forests of Michigan are planted. Tree planting does not conflict with the intent to manage according to the FSC’s definition of “natural forest management.”</p>
<p>7.1.d.3. The management plan addresses potentially disruptive effects of pests, storms, droughts, and fires as they relate to allowable cut.</p>	<p>DNR devotes substantial departmental resources to monitoring pest and pathogen activity in the forests of Michigan.</p>

	Stand level effects such as pathogen-caused mortality are properly addressed in the compartment review process.
7.1.e. Provisions for monitoring forest growth and dynamics (see also Principle 8)	
7.1.e.1. The management plan includes a description of procedures to monitor the forest.	There is a wide array of planning documents that incorporate various types of monitoring of forest conditions. Chapter 5 of <i>Operational Management Guidance for State-Owned Forest Lands</i> provides a concise discussion of monitoring processes applied to the state forests
7.1.f. Environmental safeguards based on environmental assessments (see also Criterion 6.1.)	There are extensive environmental safeguards that are incorporated into the DNR management system, such as the statewide BMPs that DNR treats as mandatory guidance.
7.1.g. Plans for the identification and protection of rare, threatened, and endangered species. (see also Criterion 6.3.)	Though there are no regional indicators for this sub-criterion, the auditors observe that DNR has devoted a very considerable level of effort to planning for the management of RTE species and their habitats.
7.1.h. Maps describing the forest resource base including protected areas, planned management activities, and land ownership.	
7.1.h.1. The management plan includes maps of such forest characteristics as: relevant landscape-level factors; property boundaries; roads; areas of timber production; forest types by age class; topography; soils; riparian zones; springs and wetlands; archaeological sites; areas of cultural and customary use; locations of sensitive, rare, threatened, and/or endangered species and their habitats; and designated High Conservation Value Forests.	MDNR has sophisticated map making and GIS capabilities; there are panoply of maps available to field managers; key resources are adequately mapped. The public has access to an extensive array of maps at multiple scales and capturing a multiplicity of data layers. Areas that are now and will be in the future designated as HCVF are mapped.
7.1.i. Description and justification of harvesting techniques and equipment to be used. (see also Criterion 6.5)	
7.1.i.1. Harvesting machinery and techniques are discussed in the management or harvest plan and are specifically matched to forest conditions in order to minimize damage.	We are not aware of any DNR planning document that discusses harvesting machinery and techniques; however, our field reconnaissance work indicates that, in fact, harvesting machinery is well matched to forest conditions and that ancillary resource damage (e.g., rutting/compaction, residual stand damage) is within acceptable levels. The timber sale contracts incorporate performance based criteria that leave contractor flexibility in terms of equipment used but that are effective at limiting resource damage.
7.1.i.2. Conditions for each timber sale are established by a timber sale contract or written harvest prescription and accompanying timber sale map.	Solid conformance observed relative this indicator—there is a detailed contract with written prescriptions and supporting maps
C7.2. The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.	77 The audit team has determined there is marginal non-conformance with this Criterion (CAR 2005.10)
7.2.a. Operational components of the management plan are reviewed and revised as necessary or at least every 5 years. Components of the long-term (strategic) management plan are revised and updated at the end of the planning period or when other changes in the management require it. (see also Criterion 8.4)	DNR is deficient relative to this criterion, particularly at scales above the stand level which are adequately addressed through the 10-year cycle of year-of-entry management that defines the compartment review and operations inventory process. Section 5.4 of <i>Operations Management Guidance for State-Owned Forest Lands</i> presents a very brief statement on the intended frequency by which “operational components of State-wide and eco-regional management plans will be reviewed and revised as necessary, but at a minimum of every five years.” While making this commitment in a new policy document is helpful, past performance with respect to maintaining currency of strategic-level plans does not provide the auditors with a strong sense of confidence. DNR will need to follow this written commitment up with sufficient resources.

	<p>The pace of completion of the eco-regional plans is clearly not compatible with the expectation of this indicator—that operational plan components are kept current. Strategic planning simply has not been a sufficient priority for the DNR, which instead has relied too much on operational planning through the compartment review/operations inventory process.</p> <p>See corrective action requests, below.</p>	
C7.3. Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plans.	85	The audit team has determined there is clear overall conformance with this Criterion.
7.3.a. The forest owner or manager assures that workers are qualified to implement the management plan (see also Criterion 4.2).	<p>DNR employees are encouraged to maintain their professional skills through internal and external training opportunities.</p> <p>Over \$200,000 was expended in the past 6 months in training staff on the new work instructions.</p> <p>Virtually all DNR employees hold at least a 2-year AA degree and most hold professional degrees; many hold advanced degrees. Clearly, DNR staff capabilities rise to the level of professional/scientific forest management.</p> <p>DNR has, over the last year, ramped up its emphasis on working with contractors to assure that their workers are adequately trained in environmental protection as well as worker safety.</p>	
7.3.b. The management plan is understandable, comprehensive, and readily available to field personnel.	<p>In that there is not a single comprehensive management plan for the 3.9 million acres of Michigan state forestland, the auditors conclude that there is inadequate conformance to this indicator, particularly the expectation that the plan is readily understandable. And since the eco-regional plans are not yet completed, the require of ready availability is presently not at exemplary levels. See corrective action request, below.</p> <p>Even in the absence of completed eco-regional plans, the auditors conclude that there is a body of planning documents that collectively are very comprehensive in terms of describing the resources found on the state forests, the demands on those resources, the key objectives of management for the forests and general as well as specific guidelines for how the forests are to be managed.</p>	
C7.4. While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.	85	The audit team has determined there is clear overall conformance with this Criterion.
7.4.a. A management plan summary that outlines management objectives (from sub-Criterion 7.1.a.), whether on private lands or the land pool under a resource manager, is available to the public at a reasonable fee. Additional elements of the plan may be excluded, to protect the security of environmentally sensitive and/or proprietary information.	<p>The entire body of planning documents is publicly available; however, the extent and complexity of this body of documents represents a considerable challenge to interested stakeholders in terms of trying to understand how they all fit together into a cohesive whole and how to extract specific information of interest—see corrective action request, below.</p>	
7.4.b. Managers of public forests make forestry-related information easily accessible (e.g., available on websites) for public review, including that required by Criterion 7.1.	<p>Extensive information and data is available on the department web site; it could be more accessible due to the magnitude and complexity of what is available.</p>	

Importance Weighted Aggregate Score for Principle 7:

Applying the weights of relative importance for the 4 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #7 Management Plan	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
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7.1	.44	83	82.8
7.2	.17	77	
7.3	.28	85	
7.4	.11	85	

Rounding to the nearest integer, the weighted average score for this Principle is:

83

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Corrective Action Requests and/or Recommendations:

Observation: As is recognized by the DNR, its key stakeholders, and the audit team, a timely completion of the three eco-regional plans is a linchpin to the Department’s focused response to the FSC Scoping Visit Report that was submitted in November, 2004. If these yet to be finished eco-regional plans were all that comprised management planning for the state forests, a Major CAR would need to be issued, requiring completion of these plans prior to award of certification. But, in fact, these eco-regional plans are but one component of a complex array of planning documents and initiatives undertaken by DNR, spanning multiple temporal and spatial scales as well as subject matter. It is this collection of planning documents and initiatives that, in the judgment of the audit team, constitutes the “management plan” for the Michigan state forests. As such, a minor CAR is deemed appropriate. But failure to complete the eco-regional plans on the schedule that DNR has publicly committed to would constitute a major non-conformance.	
CAR 2005.9	<p>c) Commit sufficient departmental resources to complete the three eco-regional plans by the announced completion dates and in full conformance with the established protocols, including substantive stakeholder involvement</p> <p>d) Conduct an assessment of current resources committed to EUP eco-regional planning effort and augment as needed, in light of the much shorter time line committed to for completing this plan</p>
Deadline	At the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion 7.1(b)6</i>

Observation: In the course of document review and DNR personnel discussions, the audit team was unable to identify a comprehensive written summary as to the frequency and scope of periodic revisions to the body of plans/documents that collectively constitute the “management plan” for the Michigan state forests.	
CAR 2005.10	Establish and make publicly available written protocols for the scope and periodicity of updates/revisions to all management planning documents, including but not limited to eco-regional planning.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 7.2(a)</i>

Observation: As a state agency, DNR documents are generally available to the public. Indeed, there is a multiplicity of management plans and planning guidance documents that are available, most of which can be accessed on the DNR Web site. But this multiplicity of documents presents a substantial challenge to all but the most motivated members of the public to grasp the totality of the DNR planning activities and how each individual plan—covering different spatial and/or temporal scales—fit together into an overarching management program designed to attain established goals and objectives. This runs counter to the transparency and public access precepts imbedded in the FSC standards and protocols, such as found in Principle	
CAR 2005.11	Develop and make publicly available a tractable and concise umbrella

	summary document that meets the FSC content requirements and provides a clear description of how the many DNR management planning documents and initiatives function as a cohesive whole.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 7.4(b)</i>

1.8 PRINCIPLE #8: MONITORING AND ASSESSMENT

Monitoring shall be conducted-appropriate to the scale and intensity of forest management-to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

As a conceptual and thematic companion to Principle 7, this Principle (elaborated through 5 Criteria) requires certified operations to engage in an aggressive and formal program of periodic monitoring of the impacts of management operations, focusing upon both bio-physical and socio-economic impacts as well as the extent of plan compliance.

Standard	Score	Comments
C8.1. The frequency and intensity of monitoring should be determined by the scale and intensity of forest management operations, as well as, the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.	80	The audit team has determined there is marginal overall conformance with this Criterion.
8.1.a. The frequency of monitoring activities follows the schedule outlined in the management plan.		MDNR operates under many different plans and each has different monitoring strategies. Under OI, frequency is every ten years. Forest health specialists have a fairly rigorous monitoring program in place for elements like, Beach Bark Disease, Emerald Ash Borer, Spruce budworm etc. Wildlife Division has various monitoring routines from annual surveys (deer pellet counts, KW breeding bird surveys) to more periodic surveys for habitat availability. Specific watershed plans have monitoring requirements and surveys built into them, which meet their respective plans.
8.1.b. Monitoring is carried out to assess: <ul style="list-style-type: none"> • The degree to which management goals and objectives have been achieved; • Deviations from the management plan; • Unexpected effects of management activities; • Social (see Criterion 4.4) and environmental (see Criterion 6.1) effects of management activities. 		<p>MDNR engages in a wide variety of monitoring activities that, collectively, address most of the subjects listed in this indicator. However, monitoring of social effects of management activities does not presently rise to a level of adequate conformance to the standard.</p> <p>Chapter 5 of <i>Operational Management Guidance for State-Owned Forest Lands</i> provides a concise discussion of monitoring processes applied to the state forests</p> <p>DNR retained an outside consulting firm to design and help in the execution of an intensive internal audit against the new Work Instructions and the certification gap analyses.</p>
8.1.c. Public and large, private land owners or managers take the lead in identifying, initiating, and supporting research efforts to address pertinent ecological questions. Small and medium private land owners or managers use information that has been developed by researchers and other managers.		MDNR is the lead agency in many resource areas (exotic pests, fire control, wildlife disease prevention and eradication, prescribed fire) and partner with many universities and researchers to answer ecological questions.
C8.2. Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators: <ol style="list-style-type: none"> a) Yield of all forest products harvested. b) Growth rates, regeneration and condition of the forest. c) Composition and observed changes in the flora and fauna. d) Environmental and social impacts of harvesting and other operations e) Cost, productivity, and efficiency of forest management 	87 ¹²	The audit team has determined there is clear overall conformance with this Criterion.
8.2.a. Yield of all forest products harvested		

¹² To generate a performance score for this criterion that is comprised of numerous sub-criteria, the audit team employed the following protocol: 1) each sub-criterion was assigned a score on the basis of the team's assessment of conformance to the indicators associated with each sub-criterion. 2) a simple arithmetic (un-weighted) average score was computed for the entire criterion, rounding to the nearest integer.

<p>8.2.a.1. The forest owner or manager maintains records of standing inventories of timber and harvest volumes of timber and non-timber species (quality and quantity).</p>	<p>Review of the timber trends analysis report verifies the tracking of harvested volumes of timber from state land. Growth can be calculated in ten-year increments based on OI. FIA data represent a periodic inventory that tracks growth and removals.</p> <p>Non-timber species harvested are minimal with lichopodium the only species under permit at this time. Mushrooms and Canada yew may need more attention in the future.</p>
<p>8.2.b. Growth rates, regeneration, and condition of the forest</p>	
<p>8.2.b.1. An inventory system is established and records are maintained for:</p> <ol style="list-style-type: none"> 1) Timber growth and mortality (for volume control systems); 2) Stocking, and regeneration; 3) Stand-level and forest-level composition and structure (e.g., by use of tools, such as ecological classification systems); 4) Abundance, regeneration, and habitat conditions of non-timber forest products; 5) Terrestrial and aquatic features; 6) Soil characteristics (e.g., texture, drainage, existing erosion); 7) Pest conditions. 	<p>Generally the MDNR does a good job through OI and under the new VMS system in meeting this indicator. More attention to non-timber resources is needed, however.</p> <p>Regeneration and stocking inventories have been sporadic and usually didn't occur until the next entry period. Under new Work Instructions regeneration surveys are specified for both natural and artificial regeneration methods.</p> <p>Fisheries biologists do an excellent job of inventorying aquatic features (spawning beds, point source and non-point source pollution, stream crossings); however, resources are sometimes lacking to address all issues identified.</p> <p>BMP non-compliance reporting and lists were reviewed and are in place.</p> <p>Inventorying and monitoring of pest conditions is becoming more sophisticated and responsive. EAB, BBD, and spruce budworm are good examples. High risk areas are identified and mapped</p>
<p>8.2.c. Composition and observed changes in the flora and fauna</p>	
<p>8.2.c.1. Forest owners or managers periodically monitor the forest for changes in major habitat elements and in the occurrence of sensitive, rare, threatened, or endangered species or communities.</p>	<p>See 6.2 above</p> <p>Maps of current deer wintering yards compared to past deer winter yards in the WUP was an example of monitoring or tracking changes in habitat elements. The Mesic Conifer Initiative is also an example of not only tracking but offering steps to achieve goals set forth.</p> <p>Kirtland Warbler habitat is tracked and bird surveys frequently show expansion of occupied habitat. Likewise, habitat for other many other rare species is tracked, and recent Wildlife Conservation Strategy provides guidance for monitoring habitat of many species in need of conservation.</p>
<p>8.2.d. Environmental and social impacts of harvesting and other operations</p>	
<p>8.2.d.1. The environmental effects of site-disturbing activities are assessed (e.g., road construction and repair, harvesting, and site preparation).</p>	<p>An array of formal and informal mechanisms exists, assuring that environmental effects of site-disturbing activities are understood.</p>
<p>8.2.d.2. Creation or maintenance of local jobs and public responses to management activities are monitored.</p>	<p>MDNR has a staff position responsible for tracking jobs, revenue and produces a directory of forest products users within the state, but this work is at the statewide level and does not attempt to isolate the effects of the state forests.</p> <p>Many DNR offices are open to the public and take calls from the publics. Open Houses also provide opportunities to monitor responses.</p>

	Nonetheless, DNR does not expressly monitor the creation or maintenance of local jobs that can be attributed to management of the state forests.	
8.2.d.3. Sites of special significance to American Indians are monitored in consultation with tribal representatives (see also Principle 3).	The Baraga FMU has done a good job in working with the Tribes in land exchanges and special site protections. Some FMU's need to be more proactive in this arena.	
8.2.e. Cost, productivity, and efficiency of forest management		
8.2.e.1. Forest owners or managers monitor the cost and revenues of management in order to assess productivity and efficiency.	DNR tracks revenues and expenses related to activities annually.	
C8.3. Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."	85	Key MDNR personnel are fully aware of their (limited) obligations with respect to maintaining the integrity of the certified supply of wood products sourced from the state forests, were certification to be achieved. Prior to award of certification, a written "documented control system" covering MDNR's limited responsibilities must be developed and submitted to SCS. See CAR 2005.12, below.
C8.4. The results of monitoring shall be incorporated into the implementation and revision of the management plan.	85	The audit team has determined there is clear overall conformance with this Criterion.
8.4.a. Discrepancies between the results of management activities or natural events (i.e. yields, growth, ecological changes) and expectations (i.e. plans, forecasts, anticipated impacts) are appraised and taken into account in the subsequent management plan.	The auditors are satisfied that MDNR forest managers incorporate adaptive approaches that build upon observed effects of past management activities; we see this functioning most effectively at the compartment level.	
C8.5. While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.	80	The audit team has determined there is marginal non-conformance with this Criterion.
8.5.a. A summary outlining the results of monitoring is available to the public at a reasonable fee, whether on private lands or a land pool under a resource manager or group certification.	As a public agency, essentially all monitoring information that is generated with respect to the Michigan state forests is available to the public; this indicator presumes that a public summary is required because the main body of information is not publicly available, which is not the case, here.	
8.5.b. Managers of public forests make information related to monitoring easily accessible (e.g., available on websites) for public review.	There is a wealth of information related to monitoring that can be found on the MDNR web site and that is otherwise publicly available, but it may be difficult for average citizen to make sense of this body of information from the website or documents currently available.	

Importance Weighted Aggregate Score for Principle 8:

Applying the weights of relative importance for the 5 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #8 Monitoring and	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
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<i>Assessment</i>			
8.1	.15	80	
8.2	.26	87	
8.3	.08	85	
8.4	.38	85	
8.5	.14	80	
			84.9

Rounding to the nearest integer, the weighted average score for this Principle is:

85

Per SCS protocols, and as this weighted average score is in excess of 80 points, acceptable overall conformance to this FSC Principle is confirmed.

Corrective Action Requests and Recommendations:

Observation: DNR has not yet developed a written “documented control system” that assures conformance with applicable FSC chain-of-custody requirements necessary for the wood harvested from the state forests to carry forward the status as “FSC certified wood.”	
CAR 2005.12	Establish written chain-of-custody procedures that comply with the FSC Principles of Chain-of-Custody and that assure: a) written notification to all DNR stumpage purchasers that the certified status of the wood harvested from the state forests will not be maintained unless the purchaser is either, themselves, a holder of a FSC CoC certificate or member in good standing of a FSC Group CoC certificate b) all paperwork associated with timber sales on the state forests include the DNR’s unique FM/CoC certificate number (to be assigned at award of certification) c) DNR has developed procedures that will enable it to provide SCS with quarterly sales volumes, by purchaser, estimated as robustly as possible
Deadline	Prior to award of certification
Reference	<i>FSC Criterion/Indicator 8.3</i>

1.9 PRINCIPLE #9: MAINTENANCE OF HIGH CONSERVATION VALUE FORESTS

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

This FSC Principle is elaborated through 4 Criteria that collectively focus on the identification and appropriate management of areas within the defined forest area(s) that possess notable attributes meriting conservation. Such attributes may be ecological or

social, in nature. Areas of high conservation value are to be managed so that the defining attributes are maintained or enhanced; focused monitoring must be undertaken with respect to efficacy of HCVF management strategies.

Standard	Score	Comments
C9.1. Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.	78	The audit team has determined there is marginal non-conformance with this Criterion (CAR 2005.13). ¹³
<p>9.1.a. Attributes and locations of High Conservation Value Forests are determined by:</p> <p>1) Globally rare, threatened, or endangered features, habitats, or ecosystems that may be present in the forest (suggested sources of information are: The Nature Conservancy, World Wildlife Fund, Conservation International, World Resources Institute);</p> <p>2) Regionally and locally rare, threatened, or endangered features, habitats, or ecosystems that may be present in the forest; culturally and tribally significant areas; or municipal watersheds that may be present in the landscape and/or certified forest (suggested sources of information include natural and cultural heritage agencies);</p> <p>3) Appropriate consultations with local and regional scientists and other stakeholders;</p> <p>4) Public review of proposed HCVF attributes and areas on large-scale and public ownerships (see also 7.4, 4.4.e., 4.4.f.);</p> <p>5) Integration of information from consultations and public review into proposed HCVF delineation;</p> <p>6) Delineation by maps and habitat descriptions</p>		<p>A coordinated process of designating HCVF has just begun (Biodiversity Conservation Planning Proposal), although substantial acreages of state forest lands have been protected in the past (1) by designation as a Natural Area; (2) as habitat for an endangered species, e.g., Kirtland’s warbler; (3) as potential old growth; (5) as a watershed area supporting a Natural River; or (5) to protect a unique natural community.</p> <p>Past designations have not resulted from a thorough assessment of eco-regions, and have, therefore, been conducted inconsistently throughout the system of state forest lands. There also has been an inconsistent public review of lands proposed for protection.</p> <p>A recent contract with MNFI has initiated surveys to locate and assess representative natural communities.</p> <p>Areas that have been identified in one of the categories listed above are clearly designated on maps and recorded in GIS format.</p>
C9.2. The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.	85	<p>This criterion is vaguely written and has led to widespread uncertainty as to the responsible party for demonstrating conformance. SCS has expressly included HCVF as a topic of focus in its call for comments, its public meetings and in its discussions with individual stakeholders. The auditors are also satisfied that the MDNR now has in place, with the new Work Instructions, a formal mechanism that provides the public with an opportunity to make HCVF nominations and to otherwise provide input.</p> <p>The audit team has determined that there is clear conformance with this Criterion.</p>
C9.3. The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.	81	The audit team has determined there is marginal overall conformance with this Criterion.
9.3.a. Forest management plans and activities are appropriate for maintaining, enhancing and/or restoring attributes that make the area an HCVF.		<p>Management plans are lacking in many areas where HCVF may be designated, but activities in many areas identified as having potential for HCVF designation (currently coded as potential old growth) are appropriate.</p> <p>Identification of potential old growth appears to vary considerably from unit to unit, emphasizing the need for a comprehensive assessment.</p>
9.3.b. Active management in HCVFs is allowed only when it maintains or enhances high conservation values.		Management for Kirtland’s warbler would be such an example, where the conservation value of the HCVF is assured only under an appropriate management regime.
9.3.c. The management-plan summary includes information about		Where management plans exist for HCVFs (Natural Rivers, Kirtland’s warbler),

¹³ Initially, a score of 75 was assigned to this Criterion. But based upon the evidence of corrective actions undertaken by DNR and submitted to SCS on December 19, the Major CAR was downgraded to a Minor CAR and the score for the Criterion was raised to 78.

HCVF management without compromising either the confidentiality of the forest owner or manager or environmentally and culturally sensitive features (see also sub-Criterion 7.1.f).	adequate information about management is presented. But, many potential HCVF designations are not included within the scope of an existing management plan.	
9.3.d. Forest owners or managers of HCVFs (forests and/or stands) coordinate conservation efforts with forest owners or managers of other HCVFs in the landscape.	Some Natural Areas are managed in cooperation with other agencies; and several conservation projects have been conducted in cooperation with The Nature Conservancy and other land conservancies. However, there is no explicit statement in the Biodiversity Conservation Planning Process that encourages such cooperative management (DNR has informed the auditors that this is addressed in the planning work instructions).	
C9.4. Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.	78	
9.4.a. Forest owners or managers of small forests may satisfy this requirement with informal observations (see 8.1 and 8.2.). When observations detect changes, the changes are documented.	Not applicable.	
9.4.b. Forest owners or managers of mid-sized and large forests monitor activities within and adjacent to HCVFs that may affect HCVF attributes (see Criteria 7.2, 8.1 and 8.2). Monitoring is adequate to track changes in HCV attributes, and may include informal observations. When monitoring detects changes to HCV attributes, the changes are documented.	Consistent with no comprehensive assessment of HCVFs; there is no program for monitoring, except for established HCVFs such as Kirtland's warbler management areas. DNR will need to develop a monitor protocol expressly focusing on HCVF in order to demonstrate adequate conformance to this criterion. See corrective action request, below.	

Importance Weighted Aggregate Score for Principle 9:

Applying the weights of relative importance for the 4 Criteria in this Principle (discussed above under Principle 1), the weighted average performance score for this Principle was determined to be:

FSC Principle #9 Maintenance of High Conservation Value Forests	Normalized Relative Importance Weights	Performance Scores	Weighted Average Score
9.1	.35	78	79.8
9.2	.11	85	
9.3	.35	81	
9.4	.19	78	

Rounding to the nearest integer, the weighted average score for this Principle is:

80

Per SCS protocols, and as this weighted average score is below 80 points, the assessment process has revealed an unacceptable overall level of conformance to this FSC Principle, resulting in the specification of one or more Major Corrective Action Requests.

Corrective Action Requests and/or Recommendations:

Observation: While the audit team is very impressed with the actions initiated by DNR in response to the Scoping Visit Report, as formalized in the new Certification Work Instructions, a demonstration of sufficient conformance to the analytical, management and consultative requirements related to areas qualifying as “high conservation value forests” requires additional actions to be undertaken after award of certification.	
CAR 2005.13	DNR must undertake the following actions with regard to the identification and management of areas meeting the FSC’s definition of “high conservation value forests” as further guided by the FSC Lake States Regional Standard: a) Finalize the establishment and public distribution of the process by which members of the public may make SCA/HCVA/ERA nominations b) Document and revise as needed procedures for assuring coordination with other ownerships possessing HCVF areas within the landscape c) Develop/clarify HCVF monitoring protocols
Deadline	At the time of the special surveillance audit in March, 2006.
Reference	<i>FSC Criterion/Indicator 9.1(a), 9.3(d) and 9.4(b)</i>

1.10 PRINCIPLE #10: PLANTATIONS

Plantations shall be planned and managed in accordance with Principles 1 through 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

In the judgment of the audit team, the silvicultural regimes employed by Michigan DNR on the Michigan state forestlands lead to forest conditions, across the working forest landscape, in which most of the attributes and characteristics of natural forests indigenous to the region remain present. As such, MDNR is not practicing “plantation forest management” as defined by the FSC and this Principle is not applicable to this certification evaluation. The reader is reminded that neither even-aged management or artificial stand establishment (planting) constitutes, per se, “plantation forest management” as this term is defined and employed in the FSC context.

1.11 Controversial Issues¹⁴

Based upon the information gathered through the course of the certification evaluation, the auditors identify the following issues that could be considered controversial in nature:

- Unauthorized ATV/ORV use and the resource damage caused by this use
- Pace/rate of completion of key MDNR planning initiatives: key planning

¹⁴ This is a mandatory section of all FSC certification reports, per the report format requirements contained in the FSC Accreditation Standard for Certification Bodies.

processes such as “potential old growth” and eco-regional planning have not conformed to the original time frames

- Timber harvest levels: the forest products industry believes that not enough timber is being harvested on the state forests and the environmental community holds the opposite view.

2.0 TRACKING, TRACING AND IDENTIFICATION OF FOREST PRODUCTS

This section of the report addresses the procedures employed by the MDNR forest managers to maintain the integrity of the flow of wood products from the point of harvest through to the point where custody is assumed by another entity (i.e., the wood products purchaser). The fundamental requirement that must be demonstrated by the forest management operation is that they are taking all appropriate steps within their sphere of control/influence to assure that the integrity of the certified supply is not compromised. In the case of MDNR, the forest manager’s responsibility is quite limited since virtually all sales are “stumpage sales” where the purchaser is responsible for harvesting and removing the wood products from the forest.

Note that FSC requires all certificates issued to be joint forest management/chain-of-custody certificates *if it is desired that wood harvested from the certified forest is to enter into the supply chain as FSC-certified product*. As this is the case with respect to the Michigan state forests, Michigan DNR’s certificate must be a joint FM/CoC certificate. Because DNR sells standing trees where it is the responsibility of the purchaser to harvest and remove the trees from the forest, the CoC component of the joint certificate is limited to the following DNR responsibilities (that are the subject of a Corrective Action Request):

- Providing written notification to all DNR stumpage purchasers that the certified status of the wood harvested from the state forests will not be maintained unless the purchaser is either, themselves, a holder of a FSC CoC certificate or member in good standing of a FSC Group CoC certificate
- Assuring that all paperwork associated with timber sales on the state forests include the DNR’s unique FM/CoC certificate number (to be assigned at award of certification)
- Developing procedures that will enable DNR to provide SCS with quarterly sales volumes, by purchaser, estimated as robustly as possible

Michigan DNR has supplied to the SCS evaluation team with a written description of its chain-of-custody procedures entitled: “**Michigan Department of Natural Resources SFI – FSC Forest Certification Chain of Custody Procedures for the Management of the Michigan State Forest.**” Based upon a review of that document, interviews with Michigan DNR personnel and field inspections, we conclude the following:

2.1 Evaluation of Risks of Mixing Certified and Un-Certified Product

While product is under the control of DNR, there is no risk of mixing certified and un-certified product. This is because trees are severed from the stump by the purchaser. As such, the risks of contamination arise under the scope of the CoC certificate held by the timber purchaser rather than DNR.

We consider that one of the greatest risks is that the timber purchasers will not be covered by their own CoC certificate or that of another entity such as a sawmill or paper mill. To address this risk, DNR is being requested, through a CAR, to clearly inform all timber purchasers that they must hold their own FSC CoC certificate or be expressly covered by another CoC certificate such as a group certificate or a sawmill's certificate (through execution of an "outsource agreement").

2.2 Description of the Log Control System

Log control is the responsibility of state forest timber sale purchasers and is appropriately addressed in the chain-of-custody audits of these purchasers. DNR's responsibility is to maintain accurate records of total volumes of wood sales, by species groups and by purchaser.

2.3 End Point of Chain of Custody

DNR's end point for its direct responsibility for controlling the integrity of the certified supply chain is when the trees are severed from the stump, as essentially all timber sales are structured such that the purchaser is responsible for harvesting and removing the trees (in log and chip form) from the forest.

2.4 Visual Identification at End Point of Chain of Custody

As the end point of the DNR's chain-of-custody responsibility is prior to the trees being severed from the stump, there is no visual identification of the end point.

Appendix 1: Conversion English Units to Metric Units Table

Length Conversion Factors

To convert from	to	multiply by
mile (US Statute)	kilometer (km)	1.609347
inch (in)	millimeter (mm)	25.4 *
inch (in)	centimeter (cm)	2.54 *
inch (in)	meter (m)	0.0254 *
foot (ft)	meter (m)	0.3048 *
yard (yd)	meter (m)	0.9144 *

Area Conversion Factors

To convert from	to	multiply by
square foot (sq ft)	square meter (sq m)	0.09290304 E
square inch (sq in)	square meter (sq m)	0.00064516 E
square yard (sq yd)	square meter (sq m)	0.83612736 E
acre (ac)	hectare (ha)	0.4047

Volume Conversion Factors

Volume

To convert from	to	multiply by
cubic inch (cu in)	cubic meter (cu m)	0.00001639
cubic foot (cu ft)	cubic meter (cu m)	0.02831685
cubic yard (cu yd)	cubic meter (cu m)	0.7645549
gallon (gal) liter		4.546
Canada liquid		
gallon (gal) cubic meter (cu m)		0.004546
Canada liquid		
gallon (gal) liter		3.7854118
U.S. liquid**		
gallon (gal) cubic meter (cu m)		0.00378541
U.S. liquid		
fluid ounce (fl oz) milliliters (ml)		29.57353
fluid ounce (fl oz) cubic meter (cu m)		0.00002957

Mass Conversion Factors

pound (lb)	kilogram (kg)	0.4535924
avoirdupois		
ton, 2000 lb	kilogram (kg)	907.1848
grain	kilogram (kg)	0.0000648

Temperature Conversion Factors

degree Fahrenheit (F)	degree Celsius (C)	$tc = (tF - 32) / 1.8$
degree Fahrenheit (F)	kelvin (K)	$tk = (tF + 459.7) / 1.8$
kelvin (K)	degree Celsius (C)	$tc = tk - 273.15$

Velocity

mile per hour (mph)	kilometer per hour (km/hr)	1.60934
mile per hour (mph)	meter per second (m/s)	0.44704

1 acre	= 0.404686 hectares
1,000 acres	= 404.686 hectares
1 board foot	= 0.00348 cubic meters
1,000 board feet	= 3.48 cubic meters
1 cubic foot	= 0.028317 cubic meters
1,000 cubic feet	= 28.317 cubic meters

Breast height = 1.4 meters, or 4 1/2 feet, above ground level

Although 1,000 board feet is theoretically equivalent to 2.36 cubic meters, this is true only when a board foot is actually a piece of wood with a volume 1/12 of cubic foot. The conversion given here, 3.48 cubic meters, is based on the cubic volume of a log 16 feet long and 15 inches in diameter inside bark at the small end.

Appendix 2: Stakeholder Groups and Individuals

The following individuals either participated in one of the three public meetings held as part of this certification evaluation or otherwise had contact with the auditors

Monday, September 19, Stakeholder Meeting in Lansing

Patrick Doran, The Nature Conservancy
Doug Pearsall, The Nature Conservancy
Ted Reuschel, no affiliation declared
Mike Moore, no affiliation declared
Larry Leefers, Michigan State University
Maggie Fields, State of Michigan
Jackie Leshkevich, Legislative Services Bureau, State of Michigan
Jay Jordan, no affiliation declared
Joe Hughes, Wolverine Power Cooperative
Richard Rondeau, Michigan ATV Association
Stephen Shine, MI Dept. of Ag.
George Berghorn, MI Forest Products Council
Josh Cohen, MNFI
Ann Woiwode, Sierra Club

Thursday, September 22, Stakeholder Meeting in Gaylord

Susan Metcalfe, USDA Forest Service (attending as a private citizen)
Bryce Metcalfe, Metcalfe Forestry
Mario Molin, Metcalf Forestry
Roger Carroll, Carroll Forest Products/MAT Board
Tony Furlich, Hydrolake/MAT Board
Ed Meadows, interested citizen
Ned Cavency, MUCC
Chris Nieman, Crandord-Roscommon CD
Martin Cottle, Michigan Snowmobile Assoc.
Allen Cottle, Michigan Snowmobile Assoc.
Tim Flynn, Sierra Club, interested citizen
Richard Kropf, Pigeon River Country Association

Public Stakeholder Meeting, Marquette, September 27

Michael Rotter, student
Jon Saari, Upper Peninsula Environmental Coalition
David E. Allen, Central UP Group, Sierra Club
Doug and Delain McCool, Halfway Lake Resort and Newberry Tourism Assn.
Chris Chase, Timber Products Co.
Jack Thomas, New Page Corp.
Randy Swaty, The Nature Conservancy
Tom Barnes, Michigan Association of Timbermen

Appendix 3: MICHIGAN DEPARTMENT OF NATURAL RESOURCES PERSONNEL INTERVIEWED DURING FIELD AUDIT

Individuals Participating Throughout the Field Audit

Dennis Nezich, Forest Certification Specialist, FMFM
Larry Pedersen, Forest Planning & Operations Unit Mgr.-Lansing
Mike Donovan, Wildlife Biologist, Wildlife Division-Lansing (week one)
Craig Howard, Bioforest (consultant to DNR)
Bill Rockwell, The Plum Line (consultant to DNR)
Penney Melchoir, Acting Assistant Chief, Wildlife Division-Lansing (week two)

Monday, September 19, Lansing Office

Larry Pedersen, Planning & Op. Unit Supervisor, FMFM-Lansing
Lynne Boyd, Chief-FMFM
David Freed, Chief-OLAF
Jim Dexter, Lake Mich. Basin Coordinator, Fisheries-MDNR
Kelley Smith, Chief-Fisheries
Jim Ekdahl, U.P. Field Deputy
Steve DeBrabander, Recreation Section, FMFM-Lansing
Scott Heather, Resource Protection Section, FMFM-Lansing
Joseph Taylor, Program Services Section Mgr., FMFM-Lansing
Jason Stephens, Silviculturist, FMFM-Lansing
Ronald Murray, Forest Health, Inventory and Monitoring Unit Mgr., FMFM-Lansing
Roger Mech, Forest Health, Inventory and Monitoring Unit, FMFM-Lansing
Cara Boucher, Section Supervisor, FMFM-Lansing
Penney Melchoir, Wildlife Division-Lansing
David Price, FMFM-Lansing
Jim Ferris, FMFM- Marquette
Kim Herman, FMFM- Marquette
Debra Huff, FMFM-Lansing
Kerry Fitzpatrick, Wildlife-Lansing
Mindy Koch, Resource Management Deputy, Lansing
Alan Marble, Law Enforcement Division.-Lansing
Harold Herta, Parks and Recreation Division-Lansing

Tuesday, September 20, Cadillac FMU

Bill Sterrett, Unit Manager, FMFM
Roger Hoeksema, WLP District Forest Supervisor
Larry Visser, Wildlife Division, Acting Unit Supervisor
Larry Smith, WLD-Baldwin
Tom Rozich, Fisheries-Cadillac
Andy Church, Forester-Cadillac
David Fisher, Forester-Manton
Dean Molnar, Cadillac-Dist. Law Supe.
Jim Malloy, Forester-Manton
Steve Press, Fire Mgt. Spec.-Cadillac

Steve Kalisz, Service Forester-Cadillac
Scott Throop, TMS/Silviculturist-WLP
Bryce Avery, Fire Officer-Baldwin
Jason Hartman, Forester-?
Dick Triplett, Fire Officer/Acting Supervisor
John Grajek, Baldwin-FMFM
Steve Eisele, Forest Tech-Manton
Todd Neiss, Recreation Specialist-WLP
Bill O'Neill, LP Field Coordinator
Katie Campbell, ORV Analyst-WLP
Mindy Rogers, Secretary-Cadillac
Cheryl Nelson, Forester-Baldwin
Sue Sobieski, Secretary, Cadillac OSC
Penney Melchoir, Acting Asst. Chief, Wildlife
Tom Haxby, Inv. & Planning Specialist-WLP

Wednesday, September 22, Gladwin FMU

Scott Throop, TMS/Silviculturist-FMFM
Brian Powers, Unit Fire Supe.-Gladwin
Tim Gallagher, Forest Tech.-Gladwin
Amy Jahnke, Forester-Gladwin
Jeff Vasher, Fire Officer-Gladwin
Nate Stearns, Fire Officer-Gladwin
Todd Neiss, Rec. Specialist-WLP
Bruce Barlow, Wildlife Tech.-Gladwin
Katie Campbell, ORV Analyst-WLP
Bill O'Neill, LP Field Coordinator
Adam Bump, Wildlife Ecologist-WLD/Bay City
Kathrin Schrouder, Fisheries Biologist, Fisheries/Bay City
Tim Reis, Wildlife Supervisor, WLD/Bay City
Jim Baker, Fisheries Unit Mgr., Fisheries/Bay City
Steven Nyhoff, Forester-Gladwin
Tom Haxby, Inv. & Planning Specialist, WLP
Mark Reichel, Forester-Gladwin
Courtney Borgondy, Unit Manager-Gladwin
Rosanne Hatfield, Secretary.-Gladwin
Chris Damvelt, Fire Officer-Harrison
Dick Shellenbarger, WLD-Gladwin
Doug Bates, FFO, Standish
Jerry Turner, FFO, Sanford

Thursday, September 22, Gaylord OSC

Thomas Stone, Service Forester-ELP
Jim Bielecki, Timber Management Specialist, ELP
Brian Mastenbrook, Wildlife Biologist, WLD
Dayle Garlock, ELP Dist. Mgr.

Jim Fisher, Resource Protection Mgr.-Roscommon
Glen Matthews, Wildlife Supervisor-WLD/Gaylord
Keith Kintigh, Wildlife Ecologist-ELP
David Borgeson, Fisheries Supervisor, MDNR-Fisheries
John Pilon, Inv. & Planning Specialist-ELP
Tim Cwalinski, Fisheries Mgt. Biologist, MDNR-Fisheries
Neal Godby, Fisheries Mgt. Biologist, MDNR-Fisheries
Paige Perry, Trails Specialist-ELP
Joyce Angel-Ling, Gaylord Unit Manager

Thursday, September 22, Gaylord FMU

Tim Greco, Forester-Gaylord
Greg Gatesy, Forester-Grayling
Don Klingler, Fire & Rec.-Gaylord
Ric Barta, Technician-Gaylord
Kimberly Lentz, Technician-Gaylord
Dayle Garlock, Dist Forest Manager-ELP
Jim Bielecki, Timber Management Specialist, ELP
Paige Perry, Trails Specialist, ELP
Brian Mastenbrook, Wildlife Biologist, WLD
Terry Krol, Fire Officer-Gaylord
Glen Matthews, Wildlife Supervisor, WLD-Gaylord
John Pilon, Inv. & Planning Specialist, ELP
Bill O'Neill, LP Field Coordinator, FMFM
Tom Rozich, Unit Supervisor, Fisheries Division
Mike Stearns, Fire Officer-Gaylord
Keith Kintigh, Forest Ecologist-ELP

Friday, September 23, Atlanta FMU

Dave Smith, Wildlife Biologist-Atlanta
Robert Theiner, Forest Technician-Atlanta
Tim Paulus, Forest Technician-Atlanta
Dayle Garlock, District Forest Mgr.-ELP
John Pilon, Inv. & Planning Specialist-ELP
Glen Matthews, Wildlife Supervisor-WLD/Gaylord
Keith Kintigh, Forest Ecologist, WLD/Gaylord
Paige Perry, Trails Program Mgr.-ELP
Tim Cwalinski, Fisheries Mgt. Biologist-Fisheries Division
Richard Barber, Forester-Atlanta
Jim Bielecki, Timber Mgmt. Specialist-ELP
Bill O'Neill, LP Field Coordinator, FMFM
Ron Murray, Unit Manager, FMFM-Lansing
Joe Soncrainte, FFO Supervisor-Atlanta
Cody Stevens, Forester-Atlanta
Laurie Marzolo, Atlanta Unit Manager

Saturday September 24, 2005 Pigeon River Unit

Joe Jarecki, FMFM Pigeon River County Unit Manager
Brian Mastenbrook, WLD, Pigeon River Country and Gaylord
Tim Cwalinski, Fisheries DNR
Don Mittlestat, FMFM Pigeon River Country
Rick McDonald, FMFM Pigeon River Country
Dayle Garlock, District Forester, FMFM Gaylord OSC
Glen Matthews, Wildlife DNR
Michael Noffze, FMFM Pigeon River Country
Steven Birk, DNR Law Enforcement
Paige Perry, FMFM Gaylord OSC
Jim Bielecki, FMFM Gaylord OSC
John Pilon, FMFM Gaylord OSC
Bill O'Neill, LP Field Coordinator, FMFM
Dennis Nezich, Forest Certification Specialist, FMFM *
Larry Pedersen, Planning and Operations Unit Manager, Lansing *
Mike Donovan, Wildlife Biologist, Lansing, Wildlife Division, DNR *
Bill Rockwell, Consultant, SRS (Consultant)
Craig Howard, Consultant, SRS (Consultant)

Monday, September 26, 2005, Newberry OSC

Rex Ainslie, Division Wildlife Biologist
Mike Paluda, UP Field Coordinator and Acting District Supervisor
Doug Wagner, EUP Wildlife Supervisor, Wildlife Division
Jon Spieles, Northern Interpretive Manager, DNR/Office of Communications
Steve Scott, Lake Superior Basin Coordinator, DNR/Fisheries
Gary Ellenwood, Parks/Rec. Gaylord District, DNR/PRD
Les Homan, Newberry Forest Unit Manager, FMFM
Don Kuhr, Timber Mgt. Specialist, FMFM
Bob DeVillez, District Planner, FMFM
Jim Waybrant, Biologist, DNR/Fisheries
Dan Moore, EUP Recreation Specialist, FMFM
Allan Keto, Resource Protection Specialist, FMFM
Penney Melchoir, Acting Assistant Chief, DNR/Wildlife
Bob Heyd, Forest Health Specialist, FMFM-Marquette
Jim Ferris, Timber Mgt. Specialist, FMFM-Marquette
Richard Stevenson, CFM/Service Forester, Newberry OSC, FMFM
Sherry MacKinnon, Wildlife Ecologist, Newberry OSC, DNR/Wildlife
Bob Moody, Fish Mgt. Unit Supervisor, Newberry OSC, DNR/Fisheries
Wayne Wheeler, ORV Specialist, Newberry OSC, FMFM

Naubinway Field Office, September 26

Sgt. David Rantanen, Conservation Officer, LED
Bob Heyd, Forest Health Specialist, FMFM
Penney Melchoir, Acting Assistant Chief, DNR/Wildlife, Lansing
John Krzycki, Fire Supervisor, FMFM
Rex Ainslie, Wildlife Biologist, DNR/Wildlife
Bob Moody, Management Unit Supervisor, DNR/Fisheries
Patrick Hallfrisch, UM, FMFM
Don Kuhr, Timber Mgt. Specialist, FMFM
Neal Godby, Fisheries Biologist, DNR/Fisheries
Amy Douglass, Forester, FMFM
Bob DeVillez, Planner, FMFM
Karen Rodock, Forester, FMFM
Steve Crigier, Forester, FMFM
Charlie Vallier, Fire Officer, FMFM
Cory Luoto, Forest Technician, FMFM
Matt Edison, Forest Technician, FMFM
Wayne Wheeler, ORV Specialist, FMFM, Newberry OSC
Mike Paluda, Acting District Supervisor and UP Field Coordinator

Marquette OSC, September 27

Mike Paluda, UP Field Coordinator
Deb Begalle, WUP District Supervisor, FMFM
Bob Doepker, WUP Wildlife Supervisor
Kim Herman, Monitoring Specialist, FMFM, Marquette
Terry McFadden, Wildlife Biologist (Gwinn), DNR/Wildlife
Darren Kramer, Fisheries Biologist, Escanaba
Wayne Wheeler, ORV Specialist, Marquette
Penney Melchoir, Acting Asst. Chief, DNR/Wildlife
Mike Koss, Wildlife Ecologist, DNR/Wildlife
Ernie Houghton, Private Lands Service Forester, FMFM
Robert Ziel, Fire Mgt. Specialist, FMFM
George Madison, West Lake Superior Unit Supervisor, DNR/Fisheries
John Hamel, I&P Specialist, FMFM
Brian Roell, Wolf Specialist, DNR/Wildlife
Jim Ferris, FMFM TMS, Marquette

Gwinn Forest Management Unit, September 27

Jim Ferris, TMS, FMFM, Marquette
Penney Melchoir, Acting Asst. Chief, DNR/Wildlife
Mike Koss, Wildlife Ecologist, DNR/Wildlife
Darren Kramer, Fisheries Biologist, DNR/Fisheries, Escandaba
Terry Popour, Fire Supervisor, FMFM Gwinn
Wayne Wheeler, ORV Specialist, FMFM, Marquette
John Hamel, Inv. & Planning Spec., FMFM, Marquette
Monica Weis, Secretary, Gwinn FMU

Kevin LaBumbard, Forester, Gwinn FMU
Pete Glover, Fire Officer, Gwinn FMU, Ishpeming
James Johnston, Forest Technician, Gwinn FMU
Jerry Mohlman, Forester, Gwinn FMU
Warren Heikkila, Forest Technician, Gwinn FMU, Ishpeming
Dean Wilson, Forester, Gwinn-Ishpeming
Deb Begalle, WUP District Supervisor, FMFM
Terry McFadden, Wildlife Biologist, Marquette OSC
John M. Koski, Forester, Gwinn FMU
Mike Paluda, UP Field Coordinator, Marquette

Baraga FMU, September 29

Martin Nelson, Unit Manager, FMFM
Brian Gunderman, Fisheries Biologist.
Robert Aho, Wildlife Biologist
Deb Begalle, WUP District Supervisor, FMFM
Mike Paluda, UP Field Coordinator, FMFM
Craig Howard, DNR Consultant
Fred Hansen, Forest Tech.
John Turunen, Forest Tech.
George Madison, Fisheries Super.
Don Mankee, Forester
Jason Mittlestat, Forester
Jim Ferris, Timber Management Specialist
Penney Melchoir, Acting Assistant Chief, Wildlife, Lansing
Ron Yesney, Recreation Specialist, W-UP
Thomas Courchaine, Lt. Conservation Officer
Wayne Wheeler, ORV Specialist
Bill Rockwell, DNR Consultant
Greg Tarnowski, FFOA, Twin Lakes
Brad Johnson, Wildlife Tech
Dan Laux, Fire Supervisor
John Mattila, Fire Officer
Tom Proulx, Fire Officer

Friday, September 30 (Exit Meeting at Marquette OSC)

Mindy Koch, Resource Management Deputy, Lansing
Lynne Boyd, Chief, FMFM Lansing
Bill Moritz, Chief, Wildlife Lansing
David Freed, Chair, Statewide Council
Mike Paluda, UP Field Coordinator, FMFM
Ron Murray, Unit Mgr., FHM Lansing
Martin Nelson, Baraga Unit Mgr., FMFM

Jim Ferris, TMS, FMFM, Marquette
Kim Herman, Forest Certification, FMFM, Marquette
Don Mankee, Forester, Baraga FMU, FMFM
David Price, FMFM Cert. Planner, Lansing
John Hamel, Inventory & Planning, FMFM, Marquette
Jeff Stampfly, FMFM, Shingleton
Bill Brondyke, FMFM, Gwinn FMU Mgr.
Richard Stevenson, FMFM, Newberry OSC
Bob Burnham, FMFM, Manistique
Penney Melchoir, Acting Asst. Chief, Wildlife, Lansing
Deb Begalle, WUP Supervisor, FMFM
Cara Boucher, FRM Section, FMFM, Lansing
Joseph J. Taylor, FMFM Program Services Section Mgr.
Les Homan, FMFM, Newberry FMU Mgr.

Appendix 4: DNR Responses to the Draft Corrective Action Requests and Auditor Reply Comments

In order to facilitate early uptake and response to observed non-conformances, draft Corrective Action Requests are conveyed to the certification applicant prior to conveyance of the draft report (in which the CARs are also contained). For this project, the draft CARS were conveyed to the Michigan DNR on October 7, 2005. Responses from DNR to the draft CARs were submitted to SCS on November 8, 2005. In the table, below, the auditors’ comments in reply to DNR’s responses are inserted throughout the table.

<p>Observation: In that there is not an accessible, comprehensive register of international agreements, conventions and treaties applicable to the management of the Michigan state forests, it is not possible for the audit team to confirm that there is adequate conformance with FSC Criterion 1.3. However, based upon the un-compiled documentary evidence and field observations, we are not aware of any evidence to suggest non-conformance with C.1.3, therefore justifying a minor rather than major Corrective Action Request.</p>	
<p>CAR 2005.1</p>	<p>Compile a concise yet comprehensive register (annotated list) of applicable international agreements, conventions and treaties and distribute to field units; complete a review to assure that the Department is in compliance with all applicable international requirements.</p>
<p>Deadline</p>	<p>60 days after award of certification</p>
<p>Reference</p>	<p><i>FSC Criterion/Indicator 1.3(a)</i></p>
<p>DNR Response: Evidence relating to this CAR is listed below and will be placed on the DNR forest certification web site. Most International agreements and conventions do not have a noticeable day-to-day relevance to the DNR’s management of the State Forests. However the following examples illustrate instances where DNR is knowledgeable of and participating in international agreements.</p> <p><u>American Indians:</u> Jim Ekdahl, U.P. Field Deputy and DNR state-wide coordinator for tribal issues, has a comprehensive list of all Indian treaties to which the State is subject (file: <i>Indian treaties index.doc</i>). Also see the 2000 Consent Decree.</p> <p><u>Other international agreements:</u> Several documents demonstrate that the DNR actively partners with the federal agencies in the implementation of many agreements that have international dimensions. Documents include:</p> <ol style="list-style-type: none"> 1. A 2003-2004 status report for bobcat and otter populations furnished to USFWS under the CITES agreement. (<i>2003-2004_CITES.doc</i>) 2. The memorandum of agreement that authorizes cooperative involvement of the DNR with respect to enforcing 15 different federal laws in the state of Michigan. (<i>Cooperative Law Enforcement MOA.pdf</i>) 3. The 2004-2005 North American Flyways directory listing several DNR staff as representatives to the Mississippi Flyway Council. (<i>Flyway Council Directory.pdf</i>) 4. The current migratory bird banding permit from the US Dept of Interior authorizing MDNR to work cooperatively in banding projects including the banding of endangered species. (<i>Migratory Bird Banding Permit.pdf</i>) 	

<p>5. The current USFWS Goose permit authorizing goose management in Michigan. (<i>USFWS Goose Permit.pdf</i>)</p> <p>Other agreements:</p> <p>6. Great Lakes Forest Fire Compact.</p> <p>7. International Joint Commission.</p> <p>8. Great Lakes Fisheries Commission.</p>
<p>Auditors' Comments in Reply:</p> <p>We are satisfied that DNR understands our requested actions and is on course for demonstrating adequate conformance. The DNR response lists examples of international agreements and conventions; conformance will be demonstrated when a comprehensive list of applicable agreements and conventions is compiled and distributed to field units. The response, above, does not indicate what DNR has done or will do to complete a review of the adequacy of the department's responses to the compiled list of agreements and conventions.</p>

<p>Observation: As indicated by the number of vacant and eliminated conservation officer, forest & fire officer, and forest officer positions as well as the extent of resource damage from unauthorized ORV use in many FMU units, as well as the general condition of state forest roads, the level of funding committed to public use management and road system maintenance is not sufficient to adequately protect the resource base, as required by the FSC Lake States Regional Standard.</p>	
<p>CAR 2005.2</p>	<p>Develop and pursue strategies for securing additional personnel for public use management and road system maintenance; prepare a briefing report on steps taken and progress made.</p>
<p>Deadline</p>	<p>By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006</p>
<p>Reference</p>	<p><i>FSC Criterion/Indicator 1.5(a) and 5.1(c)</i></p>
<p>DNR Response:</p> <p>The auditors' observation suggests a perceived lack of permanent, fulltime DNR "officer" personnel as a cause of "resource damage from unauthorized ORV use" and a (presumably negative) "general condition of state forest roads". This approach fails to consider or recognize the DNR's efforts at addressing ORV and road problems via DNR trail specialists; other full – time, part-time, or temporary employees; contractors; grants; county road commissions; and local law-enforcement personnel. As a result, the "CAR" seems to require hiring uniformed personnel when other approaches may be more effective.</p> <p>The DNR will continue to utilize ORV restoration grant funds available annually in the department's budget to address identified ORV damage. These grant funds are available to applicants to address the prioritized needs. DNR will also continue to work with the ORV Advisory Board to raise awareness of ORV issues, and to develop solutions.</p> <p>The DNR proposes to show, within one year, a wide array of efforts for addressing ORV and road and bridge maintenance issues. DNR will complete its BMP monitoring and management review cycle as per work instructions 1.2, 3.1, and 3.2. In addition, by January 30, 2006 the DNR will create a task force that will be charged with defining a Department-wide strategy for addressing illegal ORV use. The strategy will be defined by June 30, 2006, and it will address three fronts including user education, enforcement, and maintenance/restoration. DNR will demonstrate additional progress by the time of the first annual surveillance audit.</p>	
<p>Auditors' Comments in Reply:</p> <p>DNR is deriving inferences rather than responding on the basis of a careful and literal reading of</p>	

this CAR. The CAR does not require DNR to hire permanent, full-time, uniformed DNR “officer” personnel. By employing the generic term, “additional personnel” in the CAR, the authors have consciously attempted to be non-prescriptive and to allow DNR latitude in formulating a response strategy in which more human and financial resources are marshalled for the growing challenges of public use management and road system maintenance. But to further emphasize our desire to provide latitude to DNR, we will revise the language of this CAR to state “additional personnel and resources.” We are encouraged by the last paragraph of DNR’s response.

Observation: While some progress has been made under the new Certification Work Instructions, the audit team concludes that more active efforts to invite the collaborative participation of tribal representatives, *at the FMU level*, is needed in order to demonstrate adequate conformance with elements of FSC Criteria 3.3 and 8.2.

CAR 2005.3	Demonstrate continuing progress, at the FMU level, in inviting tribal participation in the identification of tribal resources and the development of appropriate management prescriptions as well as monitoring of the impacts of management on tribal resources; prepare a briefing report on steps taken and progress made.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006.
Reference	<i>FSC Criterion/Indicator 3.3(a), 3.3(b) and 8.2(d)3</i>

DNR Response:
 Fisheries and Wildlife Divisions have had a long standing relationship with the 12 federally recognized tribes. At the management unit level, Wildlife and Fisheries Divisions coordinate with local tribal representatives/biologists on a variety of issues. Examples include cooperative wildlife research projects, participation in species regulation recommendations, review and discussions on land transactions, and providing assistance on biological data collection and surveys. These efforts include regularly-scheduled meetings every year and information sharing and collaboration.

The DNR will encourage additional one-on-one contact with the tribes. Initially, FMU Unit Managers will establish regular contact with key environmental tribal officers for those tribes where the tribal chairs are located within the FMU boundary.

Through DNR contacts, tribes will be encouraged to participate in eco-regional and state-wide planning efforts.

Auditors’ Comments in Reply:
 We are satisfied that DNR understands the requested actions and that it is on course for demonstrating adequate conformance at the time of the 2006 surveillance audit in September/October. DNR is reminded that a briefing report should be prepared in advance of that audit (perhaps a few pages in length).

Observation: In the judgment of the audit team, there are is not sufficient direction to field staff for assuring identification of archeological/cultural/historic sites of importance; even more so, there is no established guidance for assuring that any such sites found during field work are properly reported to the SHPO.

CAR 2005.4	Develop and implement direction/protocols to DNR field personnel on the identification of sites of archeological, cultural, historic or
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	community importance and the procedurally appropriate means for reporting such sites to the SHPO.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 4.4(b)</i>
DNR Response:	
<p>To address the concerns of the audit team, DNR will work with The Office of the State Archaeologist (OSA) to develop basic information and/or training for staff on site identification and reporting. Also, DNR will work with OSA to either confirm the adequacy of the current process or revise the process to meet their needs without compromising the possible sites. The protocol/process will be disseminated to staff. DNR expects to work with OSA to: 1) develop protocols for field identification and documentation of possible sites, 2) develop protocols for referring possible sites to OSA for assessment and evaluation, and 3) develop training and training materials (workshops, power points etc.) for staff.</p> <p>4.4(b) requires that ‘input is sought in identifying significant sites of archaeological...’. OSA is responsible for documentation and protection of archaeological and historic sites in Michigan. Its records include 18,000 sites on land, and 1400 shipwrecks. These records constitute the most comprehensive collection of books, unpublished reports, and documents on Michigan archaeology in our state. In addition, the OSA supports university field schools on state lands, and works with the State Historic Preservation Office to provide grants for archaeological projects.</p> <p>DNR Operations Inventory procedures require that compartment review information and proposed treatments be submitted to the OSA (SHPO) office for review and comment. Comments related to historical sites are retained in the OI ‘locked’ comments field so that locations are not exposed. OSA provides direction on protecting sites. OSA has also provided training and information on reporting possible sites. In the past, telephone calls or brief written notes have been used to report possible historic sites, as OSA does not have a reporting form.</p>	
Auditors’ Comments in Reply:	
<p>The auditors are satisfied that DNR understands the requested actions and is on course for demonstrating conformance to the CAR by the time of the special/supplemental audit in Q1 of 2006.</p>	

Observation: The collaborative working relationship between DNR and MNFI is hampered by the recent cutbacks in funding for MNFI survey work on the state forests; the underlying goal of that collaboration—to identify and protect notable natural features found within the state forest system—is further hampered by inadequate guidance to DNR field staff on identifying state and federally listed plant species.	
CAR 2005.5	<p>a) Develop and pursue strategies to assure a renewed/enhanced effort to conduct field surveys and assessments for rare, threatened, and endangered species and communities on the Michigan state forestlands.</p> <p>b) Develop and implement direction/protocols to DNR field personnel designed to assure more systematic on-the-ground assessment of state and federally listed plant species</p> <p>c) submit to SCS, no later than 6 months after award of certification, a briefing document that details progress made on parts a) and b).</p>
Deadline	6 months after award of certification
Reference	<i>FSC Criterion/Indicator 6.1(a) and 6.2(c)</i>
FSC indicators 6.1.a and 6.2.c below are for reference.	

6.1.a Using credible scientific analyses & local expertise, & assessment of current conditions is completed to include4) sensitive, t & e species & their habitat ...

6.2.c For management planning purposes, forest ownersuse, participate in, or carry out on-the-ground assessments for the occurrence of state and or Federally listed as threatened, endangered, of special concern, or sensitive species.

For example: The forest owner or manager uses an appropriate survey for listed species.

DNR Response:

The DNR currently has a robust program in place to identify and protect threatened and endangered species (T&E) with funding being provided by the Wildlife and Forest, Mineral, and Fire Management Divisions. The DNR will never *completely* inventory all state forest lands for *all* threatened and endangered species (T&E) and rare communities. Our assessments of the potential for T&E and rare communities use survey methods that rely on effective and efficient sampling. The new Michigan Natural Features Inventory (MNFI) Identifying Priority Conservation Areas project will model within an ecological classification system framework, the best places to conserve for a variety of biodiversity values, including T&E species and rare natural communities. An important component of this project will be a quantitative evaluation of the “Natural Heritage methodology” for identifying the best places to conserve. Upon completion of field surveys within eco-units, the DNR and MNFI will have quantitative estimates of errors of omission in the identification of high priority areas to conduct field surveys. This project is one example of the DNR’s systematic approach to the protection of notable natural features.

The Michigan DNR Mineral and Fire Management (FMFM) Division, also complies with FSC criteria/indicators 6.1.a and 6.2.c. by systematically: 1) reviewing existing records, 2) visiting stands during forest inventory, 3) contracting with MNFI to a) participate in planning through the Compartment Review Process, b) survey for listed species and c) provide training on natural communities and listed species to FMU forestry and wildlife staff. For each Year of Entry a MNFI Ecologist reviews the compartments and sends a list with locations for potentially effected listed plants and animals followed by a substantive written narrative describing the species, habitat and management known to or that may occur within or near each stand being treated. If there is strong potential a listed species may occur within a stand to be treated, based on existing habitat and staffs field knowledge, Work Instruction 1.4 Biodiversity Management on State Forestlands directs field staff to request a field survey. For Fiscal Year 2006, funding resources are allocated to accomplish these surveys. MNFI is also under contract in FY 2006 to survey Ecological Reference Areas on state forestlands. (See the attached FSC-6.2.c document for additional evidence regarding surveys for listed species by MNFI and others.)

In addition, FMFM has contracted annually with MNFI since 1996 to provide training to field staff on significant local and regional natural communities and the listed species within them. Table 1 below is a summary of the training from 1996 – 2004 (See attached MNFI Training Summary document for further details). FMFM and Wildlife Division staff utilize this training and the references and abstracts from the MNFI website <http://web4.msue.msu.edu/mnfi/data/specialplants.cfm> to demonstrably protect and manage listed plant species. For example, due to training in the identification, ecology and management of the globally threatened pine barrens community, the Grayling Forest Management Unit (FMU) field staff recognize, protect and manage the associated rare plant species: rough fescue *Festuca scabrella* – state threatened, pale agoseris *Agoseris glauca* – state threatened, Hill’s thistle *Cirsium hillii* – special concern, and Alleghany plum *Prunus alleghaniensis* var. *davisii* – special concern. Similarly, when the field staff in the Sault Ste. Marie FMU find the state threatened walking fern *Asplenium rhizophyllum* and state endangered Hart’s tongue fern *Asplenium*

scolopendrium which grow on dolomite boulders in northern hardwoods, they protect and manage them during forest treatments by reserving sufficient shade in the overstory canopy.

Table 1. Summary of MNFI Training Workshops by Region.

Workshop	WUP	EUP	NELP	NWLP	SELP	SWLP
Alvar		1996				
Conservation Planning	1998*	1998*	1998*	1998*	1998*	1998*
Dry-mesic northern forest	2003					
	1996	1996	1996	1996		
	1997*	1997*	1997*	1997*	1999*	1999*
	2001*	2001*	2001*	2001*	2006*	2006*
Introductory Workshop	2006	2006	2006*	2006*		
Invasive Species – Early Detection and Control	2006	2006	2006*	2006*		
Issues of Scale and Multiple Classifications			2006 *			
		1996				
		1997				
Northern Hardwoods	2000	2002		1996		
			1996*	1996*		
Pine Barrens			1999*	1999*		
Plant ID for Kotar Classification	2004	2003	2003*	2003*		
		2005	2005*	2005*		
Prairie Fen					1999	
Regional Workshops		2000	2003	2001	2001	2000
Riparian Management Zone Workshop	2004	2004	2006	2006	2002	2002
Woodland Raptors			1999			
	2002	1996	2001	2000	2003**	2000

* indicates single workshop covering more than one region.

**wildlife division funded

Auditors’ Comments in Reply:

The auditors are impressed with the substance of what is conveyed in the DNR response. As we understand it, DNR is indeed engaged in an array of efforts to identify and protect listed species as well as special/notable features. A key feature of the department’s effort is a risk-based approach focusing on priority conservation areas and an ecological classification system. But on the other hand, we received direct and clear input from stakeholder organizations such as MNFI that the state’s overall efforts in this arena have been hampered by cutbacks in DNR’s funding of MNFI survey work. We have been presented with a viewpoint that these funding reductions have reduced the overall level of field survey work conducted by MNFI specialists and that this is having an adverse effect on the department’s overall effort. Clearly, there are differences of perspective surrounding this topic. The critical question we face, as third-party auditors, is whether the department’s more focused and risk-based approach to T&E issues sufficiently offsets the funding reductions.

In recognition of the uncertainty of the true situation in the face of the differing perspectives, we have slightly moderated the basis of the CAR (“Observations”) my changing the first sentence from “...is hampered by the recent cutbacks in funding” to “...may be hampered...”

It is our sense that DNR can demonstrate adequate conformance to this CAR through submittal of a briefing document within 6 months of award of certification that more comprehensively compiles and presents its evidence that its efforts at identifying and protecting listed species and special/notable features is indeed efficacious even in the face of funding reductions. The briefing document should also address the request that DNR assure that there is sufficient direction to the field with respect to identification of listed plant species. During this time period, as well, we

hope that DNR can work to resolve the differences of perspective with MNFI.

Observation: In the course of examining recent (YOE 2003 and 2004) regeneration harvests on 8 FMFM FMUs, the audit team observed a substantial variation—across units and across individual foresters—in the extent and manner in which green retention is laid out and implemented. Likewise, the audit team concludes that more emphasis needs to be placed on recognizing and appropriately managing areas possessing resources of limited distribution (e.g., Canadian yew) and/or heightened sensitivity (e.g., seeps, springs and wet areas). Furthermore, stakeholder comments and field observations indicate that high populations of ungulates might have detrimental effects on the diversity of understory plants and regeneration of valued forest trees.

CAR 2005.6	<p>Develop and implement direction/protocols to DNR field personnel on:</p> <ul style="list-style-type: none"> • the ecological bases for in-stand structural retention, particularly during regeneration harvesting, to assure more consistent uptake across all FMUs • the identification and management of areas (as small as portions of individual stands) possessing notable ecological attributes, to assure more consistent uptake across all FMUs • an assessment—throughout the ownership—of effects of browsing by ungulates.
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Deadline	By the time of the special surveillance audit during the first quarter of 2006, (a) and (b); and by the first annual surveillance audit, (c).
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Reference	<i>FSC Criterion/Indicator 6.3(a)3, 6.3(a)5, 6.3(b)1, 6.3(c)3</i>
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DNR Response:

(a) Recommendations/direction for in-stand structural retention is currently being developed. FMFM and Wildlife Divisions are in the process of revising Silvicultural Guidelines for State Forest Cover Types. These guidelines will include specific recommendations by cover type for both green tree and dead wood retention levels. The portion of the Silvicultural Guidelines pertaining to ecological bases for in-stand structural retention and the related biodiversity guidelines for major cover types will be completed by March 31, 2006.

(b) Guidance related to the identification and management of areas possessing notable ecological attributes is contained in the document Conservation Area Management Guidelines, MDNR Forest, Mineral & Fire Management, IC 4450 (Rev. 09/xx/2005) on page 10:

"DNR forest management staff should be aware of habitat features both within stands and within larger features of which the stand is part of (corridor, yard, etc.) and use protection strategies to conserve these habitat features in day-to-day management of state forest land. Forest managers, Wildlife and Fisheries Biologists should work cooperatively to determine protection and management options for habitat features. The Wildlife Action Plan (former Wildlife Conservation Strategy) provides species specific information for managers."

In addition, guidance on cover type-specific potential ecological attributes will be included in the revised Silvicultural Guidelines. Examples may include management direction on prairie-remnant species in jack pine systems or ground hemlock in northern hardwood systems.

(c) FSC Criterion/Indicators below are for reference.

6.3.a.3 Measures are taken to ensure the retention of endemic and difficult-to-regenerate species.

6.3.b.1. Forest management conserves native plant and animal communities and species. For

example.....Diversity of understory species is maintained.

The Vegetation Management Team is establishing a sub committee to address mammalian herbivory on state forest lands. This committee will be made up of WLD and FMFM staff with the express purpose of: 1) developing a protocol to measure the extent of browse on select species; 2) implement the protocols to assess browse; and 3) propose solutions should herbivory be determined to have a significant negative impact on forest vegetation. This committee will be formed by January 1, 2006. The committee will develop protocols by May 1, 2006 and assessments will begin by June 1, 2006. A preliminary assessment will be completed within one year.

Auditors' Comments in Reply:

The auditors are comfortable that DNR understands the requested actions and that it is in the process of developing appropriate responses. We look forward to the opportunity to review this topic with DNR during the special/supplemental audit in Q1 of 2006 (probably late March).

Observation: On the basis of document reviews and DNR personnel discussions, the audit team is unable to confirm adequate conformance to the FSC Lake States Regional Standard requirement that “forest owners or managers maximize habitat connectivity to the extent possible at the landscape level.”

CAR 2005.7	Within the OI/IFMAP and eco-regional planning processes, modify procedures as necessary to assure maximum practicable habitat connectivity.
Deadline	By the 2006 annual surveillance audit, expected to take place during Sept.-Nov., 2006.
Reference	<i>FSC Criterion/Indicator 6.3(b)4</i>

DNR Response:

Successful implementation of existing Work Instructions and a new MNFI State-wide Surveys Project (a part of the biodiversity conservation analysis), will assure that habitat connectivity at the landscape level is considered in the management of State Forest land.

Habitat connectivity at the landscape level using an ecological classification system will be assessed in the MNFI State-wide surveys project. The results of the analyses will inform the eco-regional planning process. At the planning level, the Criteria and Indicators effort has documented habitat connectivity as an important value to our stakeholders and the DNR, and resulted in the identification of potential metrics to measure the DNR’s success in protecting this value. Work Instruction 1.3 (Eco-regional Plan Development) provides an outline for eco-regional plans that includes the identification of important large landscape-level forest and important habitat corridors. Work Instruction 1.3 also directs all DNR personnel within an eco-region to implement the plan through on the ground operations.

At the operational level, Work Instruction 1.4 (Biodiversity Management) directs field staff to consider habitat connectivity in the management of Special Conservation Areas where connectivity would enhance the management of the areas for their designated values. Work Instruction 3.1 (Forest Operations) directs the DNR to utilize BMP practices in riparian zones. Riparian zone BMPs enhance the protection of habitat connectivity in stream and river corridors.

Habitat connectivity was discussed as part of the compartment review process pre-Work Instructions. Work Instruction 1.6 (FMU Analysis) formalizes the discussion of habitat connectivity as part of the Pre-Inventory review meeting for an entire Forest Management Unit. The switch from OI to IFMAP will facilitate discussions of habitat connectivity issues because

many of the data layers that will be used to assess connectivity are available as GIS data layers in IFMAP. Work Instruction 1.2 (Management Review) directs the DNR to carry out internal audits as a way of monitoring and reporting our effectiveness in implementing work instructions and hence, the maintenance of habitat connectivity.

Auditors' Comments in Reply:

The auditors are satisfied that DNR understands the requested actions and we are comfortable with the direction and approach, described above, that DNR is taking in response. This evidence suggests that DNR will be well prepared to demonstrate conformance to the CAR by the time of the 2006 surveillance audit in September/October.

Observation: The audit team notes that no additions to the Natural Areas Program have been made for over a decade, despite a substantial queue of nominated areas. The suspended status of this program was raised as a concern by a variety of stakeholder groups. Its suspended status is incompatible with demonstrated conformance to FSC Criterion 6.4.

CAR 2005.8	<p>Undertake necessary departmental actions to:</p> <ul style="list-style-type: none"> • re-establish active designations to the Natural Areas Program • assure completion of the Biodiversity Conservation Committee's Phase I analysis in time to provide substantive guidance in the development of the EUP eco-regional plan • submit to SCS, no later than 6 months after award of certification, a briefing document that details progress made on parts a) and b).
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Deadline	6 months after award of certification
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Reference	<i>FSC Criterion/Indicator 6.4(a) and 6.4(b)</i>
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FSC Criterion 6.4 and Indicators 6.4.a and 6.4.b below are for reference.

6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.

6.4.a. Where existing protected areas within the landscape are not of a size and configuration to serve the purposes listed in the above Applicability Note, forest owners or managers, whose properties are conducive to the establishment of such ecologically viable areas, designate them. The size, extent, and arrangement of on-site and off-site (i.e., on and off of the certified forest) representative sample areas are designated, documented, and justified.

For example: Management plans address the spatial relationships between or among representative samples, protected areas, and managed areas and may include gap analysis.

6.4.b. Large private and public forest owners or managers use or carry out an analysis to evaluate the extent to which representative samples of existing ecosystems are adequately protected in the landscape. The size and extent of representative samples on public lands are determined through a management planning process that includes public input (see also Indicator 4.4.e).

DNR Response:

(a) The biodiversity conservation planning process will be the method the DNR uses to identify ERAs, HCVAs and SCAs. DNR will clarify how natural area designations fit into this process by June 1, 2006.

All biodiversity analyses including the protection analyses will be made available to the state biodiversity design team for review. Legal dedication under the Public Act 451, Part 351 offers

one of the highest forms of protection offered by the State. Not all areas are of sufficient quality to justify legal dedication. As part of the Biodiversity Planning Process all Ecological Reference Areas will be reviewed relative to the level of protection the department and the public deems necessary. The backlog of nominated natural areas on state forest land will be vetted through the biodiversity conservation planning process. The DNR is demonstrating its commitment to the legal dedication of natural areas by providing staff support and by currently moving forward with the dedication of the Algonac Prairies and Savannas Natural Area, at Algonac State Park in Southeast Michigan.

Natural Areas nominated for legal dedication are one category of many Special Conservation Areas managed by the DNR. All DNR natural areas including those nominated for legal dedication are mapped, protected and managed per the implementation of the Natural Areas Program Strategic plan, Work Instruction 1.4 Biodiversity Management on State Forestlands, and the Conservation Area Management Guidelines, Appendix D.

(b) Many of the Biodiversity Conservation Committee's Phase I tasks identified below are under way. The DNR will keep the auditors abreast of progress on these tasks, though not all may be able to be accomplished by June, 2006.

1. The Statewide team identifies the general distribution and quantity of each of the 74 Michigan Natural Features Inventory natural community types which exists now and in the past. This also includes the large task of identifying biophysical data sources and those spatial and tabular analyses that will be needed. The team should strive to identify any significant variations in natural community types.
2. The Statewide team defines conservation objectives and targets and values for each community type. Key tasks include determining community uniqueness and rarity, threats to the ecological health of a given natural community, and potential for conservation of a given natural community.
3. Determine and rate the quality, condition and functionality of a natural community over the landscape of Michigan. Also, the team must rate the potential to preserve the quality, condition and functionality of a natural community ecosystem(s) and natural processes over the next century. This will involve defining the importance of various ecological criteria to maintain or restore biodiversity within a natural community and its surrounding landscape.
4. Identify statewide social and economic trends, as well as social and economic constraints to conserving biodiversity in any given landscape. This will involve further refinement in the identification of biophysical data requirements.
5. Provide information, data and direction to the four eco-regional teams to allow the eco-regional teams to move ahead with the biodiversity conservation process. This includes:
 - a. List of conservation objectives associated with each community type.
 - b. Checklist of ecological criteria important for each conservation objective.
 - c. Relevant economic & social data, definitions and profiles.
 - d. Relevant biophysical data.
 - e. Suggested list of other planning processes to connect with.
 - f. Announcements to interested outside groups.

Auditors' Comments in Reply:

The auditors are satisfied that the DNR adequately understands the requested actions and we are comfortable with the response approach as summarized in the DNR Response. Upon consideration of the DNR's comments and upon further deliberation amongst ourselves, we agree that 6 months is too short of a time frame to enable fully adequate response so we have extended the due date of this CAR to the time of the 2006 surveillance audit.

<p>Observation: As is recognized by the DNR, its key stakeholders, and the audit team, a timely completion of the three eco-regional plans is a linchpin to the Department’s focused response to the FSC Scoping Visit Report that was submitted in November, 2004. If these yet to be finished eco-regional plans were all that comprised management planning for the state forests, a Major CAR would need to be issued, requiring completion of these plans prior to award of certification. But, in fact, these eco-regional plans are but one component of a complex array of planning documents and initiatives undertaken by DNR, spanning multiple temporal and spatial scales as well as subject matter. It is this compendium of planning documents and initiatives that, in the judgment of the audit team, constitutes the “management plan” for the Michigan state forests. As such, a minor CAR is deemed appropriate. But failure to complete the eco-regional plans on the schedule that DNR has publicly committed to would constitute a major non-conformance.</p>	
<p>CAR 2005.9</p>	<p>e) Commit sufficient departmental resources to complete the three eco-regional plans by the announced completion dates and in full conformance with the established protocols, including substantive stakeholder involvement</p> <p>f) Conduct an assessment of current resources committed to EUP eco-regional planning effort and augment as needed, in light of the much shorter time line committed to for completing this plan</p>
<p>Deadline</p>	<p>At the time of the special surveillance audit in the first quarter of 2006</p>
<p>Reference</p>	<p><i>FSC Criterion 7.1(b)6</i></p>
<p>DNR Response:</p> <p>Part (a): All three eco-regional planning teams have prepared timelines for completion of their respective plans according to Work Instruction 1.3. Eco-teams are presently making staff assignments and organizing work groups according to the timelines and Work Instruction 1.3. A set of state-wide Criteria and Indicators (C&I) have been drafted based on stakeholder input and values exploration. Plan development, including C&I and other analyses, has been supported by other external public agencies (e.g., US Forest Service, MNFI). Aside from initial stakeholder values gathering efforts, public review of the eco-regional plans will occur at least twice during plan drafting and rollout for all three eco-regions. State-level staff are assisting in the eco-regional planning effort.</p> <p>Part (b): The Eastern Upper Peninsula Eco-team (EUP team) has completed an in-depth analysis of resources needed to achieve its established timeline (one-year less than the other two eco-regions). This analysis was completed by Forest Certification planning staff, Division representatives on the EUP team, and Lansing staff specialists. The consensus reached was that Department staff, with support of appropriate Division upper-level managers and management unit supervisors, is at a sufficient level to achieve plan completion by the established deadline. To that end, the EUP FMFM Planning & Inventory specialist position has been committed fulltime to the eco-regional planning effort. In addition, the Cooperative Forest Management specialist has been committed to this effort for at least one-quarter of that position’s work load. The time allocated to the Wildlife Ecologist position (Wildlife Division) for eco-regional planning has also been increased to support this effort. Likewise, Wildlife and Fisheries Division’s are committing staff (not directly or normally linked to the EUP team) towards this effort. Finally, the EUP team has established a planning team which is going to be meeting bi-weekly to ensure continuity in plan development.</p>	
<p>Auditors’ Comments in Reply:</p> <p>The DNR Response indicates that the requested actions are understood and that the department fully appreciates the importance of completing the eco-regional plans on time. We look forward</p>	

to discussing this topic during the special/supplemental audit in late March, 2006.

Observation: In the course of document review and DNR personnel discussions, the audit team was unable to identify a comprehensive written summary as to the frequency and scope of periodic revisions to the body of plans/documents that collectively constitute the “management plan” for the Michigan state forests.

CAR 2005.10	Establish and make publicly available written protocols for the scope and periodicity of updates/revisions to all management planning documents, including but not limited to eco-regional planning.
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Deadline	By the time of the special surveillance audit in the first quarter of 2006
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Reference	<i>FSC Criterion/Indicator 7.2(a)</i>
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FSC Criterion 8.4 and Indicators 7.2.a and 8.4.a below are for reference.

*FSC Criterion/Indicator 7.2(a) Operational components of the management plan are reviewed and revised as necessary or at least every 5 years. Components of the long-term (strategic) management plan are revised and updated at the end of the planning period or when other changes in the management require it.
(see also Criterion 8.4)*

FSC Criterion 8.4. The results of monitoring shall be incorporated into the implementation and revision of the management plan.

8.4.a. Discrepancies between the results of management activities or natural events (i.e. yields, growth, ecological changes) and expectations (i.e. plans, forecasts, anticipated impacts) are appraised and taken into account in the subsequent management plan.

DNR Response:

By March 31, 2006 the Statewide Resource Planning Team will add expected update/revision dates to the compendium of plans referenced in CAR 11.

Section 5.4 of the Operational Management Guidance document addresses the revision requirements of FSC 7.2(a), stating that:

“Operational components of State-wide and eco-regional management plans will be reviewed and revised as necessary, but at a minimum of every five years. Strategic components of Statewide and eco-regional management plans are to be reviewed and if necessary revised or updated at the completion of each 10-year compartment review cycle, or when other changes in management require revision.

The 10-year planning cycle for compartment reviews is operationally implemented by O.I. and Compartment Review Procedures, as contained in FMD Policy 441 dated January 19, 2000.”

Ecoregional Management Plans will also contain a specific section dedicated to review and revision processes.

Auditors’ Comments in Reply:

We are satisfied with the DNR’s response and we look forward to discussing this topic with DNR personnel during the special/supplemental audit in late March, 2006.

Observation: As a state agency, DNR documents are generally available to the public. Indeed,

<p>there is a multiplicity of management plans and planning guidance documents that are available, most of which can be accessed on the DNR Web site. But this multiplicity of documents presents a substantial challenge to all but the most motivated members of the public to grasp the totality of the DNR planning activities and how each individual plan—covering different spatial and/or temporal scales—fit together into an overarching management program designed to attain established goals and objectives. This runs counter to the transparency and public access precepts imbedded in the FSC standards and protocols, such as found in Principle</p>	
CAR 2005.11	Develop and make publicly available a tractable and concise umbrella summary document that meets the FSC content requirements and provides a clear description of how the many DNR management planning documents and initiatives function as a cohesive whole.
Deadline	By the time of the special surveillance audit in the first quarter of 2006
Reference	<i>FSC Criterion/Indicator 7.4(b)</i>
<p>FSC indicator 7.4(b) and Criterion 7.1 below are for reference. <i>FSC Criterion/Indicator 7.4(b) Managers of public forests make forestry-related information easily accessible (e.g., available on websites) for public review, including that required by Criterion 7.1.</i> <i>FSC Criterion 7.1. The management plan and supporting documents shall provide:</i></p> <ul style="list-style-type: none"> <i>a) Management objectives.</i> <i>b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.</i> <i>c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.</i> <i>d) Rationale for rate of annual harvest and species selection.</i> <i>e) Provisions for monitoring of forest growth and dynamics.</i> <i>f) Environmental safeguards based on environmental assessments.</i> <i>g) Plans for the identification and protection of rare, threatened and endangered species.</i> <i>h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.</i> <i>i) Description and justification of harvesting techniques and equipment to be used.</i> <p>DNR Response: As noted by the auditors, a compendium of planning documents has already been built into the forest certification web site. The site will be reorganized by the Statewide Resource Planning Team and presented in a format that explains how all of the different documents function as a cohesive whole to further the attainment of our management goals and objectives.</p> <p>Section 1.3 and Appendix D of the Operational Management Guidance document address the issue of the many DNR planning documents and initiatives, and will be modified to present the same information as the web site.</p>	
<p>Auditors' Comments in Reply: We are satisfied with the DNR's response and we look forward to discussing this topic with DNR personnel and reviewing the pertinent sections of the DNR web site during the special/supplemental audit in late March, 2006.</p>	

Observation: DNR has not yet developed a written “documented control system” that assures conformance with applicable FSC chain-of-custody requirements necessary for the wood harvested from the state forests to carry forward the status as “FSC certified wood.”	
CAR 2005.12	Establish written chain-of-custody procedures that comply with the FSC Principles of Chain-of-Custody and that assure: a) written notification to all DNR stumpage purchasers that the certified status of the wood harvested from the state forests will not be maintained unless the purchaser is either, themselves, a holder of a FSC CoC certificate or member in good standing of a FSC Group CoC certificate b) all paperwork associated with timber sales on the state forests include the DNR’s unique FM/CoC certificate number (to be assigned at award of certification) c) DNR has developed procedures that will enable it to provide SCS with quarterly sales volumes, by purchaser, estimated as robustly as possible
Deadline	Prior to award of certification
Reference	<i>FSC Criterion/Indicator 8.3</i>
DNR Response: a) The Timber Sale Specialist will insert a statement into general specifications/bid instruction in every Timber Sale Prospectus: "The area encompassed by this timber sale is certified to the standards of the Forest Stewardship Council (FSC) – Certificate #SCS-FM/COC-XXXXXX and the Sustainable Forestry Initiative (SFI) – Certificate #XXXXXX. Forest products from this sale may be delivered to the mill as “FSC and / or SFI certified” as long as the contractor hauling the forest products is chain-of-custody (COC) certified or covered under a COC certificate from the destination mill. The purchaser is responsible for maintaining COC after leaving the sale area." b) The above statement will be inserted into the general contract specifications of every Timber Sale contract. c) The Timber Sale Specialist will provide required information to the FSC auditor. Reporting volume will be total volume in cords and will be reported on a monthly rather than quarterly basis.	
Auditors’ Comments in Reply: The DNR response is adequate. But to close out this CAR, we need to receive a written document entitled something to the effect of: “DNR Chain of Custody Procedures” that memorializes its commitments with respect to notification of timber purchasers and volume data compilation and submittal to SCS. This document need not be lengthy but there needs to be one on file. (Note: On December 19, DNR in fact submitted a CoC control system document and this CAR was closed.)	

Observation: While the audit team is very impressed with the actions initiated by DNR in response to the Scoping Visit Report, as formalized in the new Certification Work Instructions, a demonstration of sufficient conformance to the analytical, management and consultative requirements related to areas qualifying as “high conservation value forests” requires that some additional steps be taken prior to award of certification, steps that can be reasonably completed prior to the end of 2005, if sufficient staff resources are dedicated.	
CAR 2005.13	DNR must undertake the following actions with regard to the identification and management of areas meeting the FSC’s definition

	<p>of “high conservation value forests” as further guided by the FSC Lake States Regional Standard:</p> <ul style="list-style-type: none"> • Name all members of the Biodiversity Conservation Committee and assure that the team members have sufficient available time to execute their duties • Establish/clarify the process by which members of the public may make SCA/HCVA/ERA nominations • Document and revise as needed procedures for assuring coordination with other ownerships possessing HCVF areas within the landscape • Develop/clarify HCVF monitoring protocols
Deadline	Prior to award of certification
Reference	<i>FSC Criterion/Indicator 9.1(a), 9.3(d) and 9.4(b)</i>
<p>DNR Response: The Statewide Council (SWC) is scheduled to appoint a statewide Biodiversity Conservation Planning Team at its November 1, 2005 meeting. The Biodiversity Conservation Planning Process defines several immediate activities they will undertake. In addition to these activities they will clarify the process by which members of the public may make SCA/HCVA/ERA recommendations. This information will be on the DNR website by December 31, 2005. Note: the general public currently has opportunity to provide recommendations in the existing Open House/Compartment Review process.</p> <p>DNR has worked with other organizations and landowners, notably the USDA Forest Service and The Nature Conservancy (who has coordinated efforts with large industrial landowners) to identify, document, and protect biological and ecological legacies through a variety of mechanisms. These activities are ongoing. As part of the management review process, activities will be summarized and information shared.</p> <p>Monitoring of HCVAs include the following:</p> <ul style="list-style-type: none"> • Per Work Instruction 1.4 Biodiversity Management on State Forestlands HCVAs are reviewed during Compartment Reviews. • Internal Audits that include monitoring and review of SCA/HCVA/ERA are conducted each year. • Opportunistic Field Surveys (OFS) will be used to report on the ground conditions/changes on HCVAs. 	
<p>Auditors’ Comments in Reply: The overall thrust of DNR’s response appears to be appropriate. In order to either close this Major CAR or downgrade it to a Minor CAR prior to award of certification, SCS will need to receive additional information from DNR such as: a) a list of personnel now comprising the Biodiversity Conservation Planning Team, b) a written summary of the process by which members of the public may make SCS/HCVA/ERA recommendations, c) more detail on coordination with other land management entities as well as HCVF monitoring protocols.</p> <p>(Note: On the basis of evidence presented on December 19, the scope of this Major CAR was narrowed and it was downgraded to a Minor CAR.)</p>	