

Michigan Department of Natural Resources

Forest Certification Work Instructions

(Complete Set)

8-19-05

(Replaces version dated 6-29-05)

DNR FOREST CERTIFICATION WORK INSTRUCTIONS
Table of Contents
8-19-05

Work Area Group 1 - Plan, Monitor, and Review

1.1 Strategic Framework for Sustainable Management of State Forest Land.....	2
1.2 Management Review Process for Continual Improvement in the Management of Forest Resources	6
1.3 Ecoregional Plan Development	9
1.4 Biodiversity Management on State Forest Lands	14
1.5 Social Impact Considerations and Public Involvement Processes	22
1.6 Forest Management Unit Analyses	27
1.7 State Forest Timber Harvest Trends	30

Work Area Group 2 - Forest Regeneration and Chemical Use

2.1 Reforestation	33
2.2 Use of Pesticides and Other Chemicals on State Forest Lands.....	36
2.3 Integrated Pest Management and Forest Health	40

Work Area Group 3 - Best Management Practices

3.1 Forest Operations	43
3.2 Best Management Practices Non-Conformance Reporting Instructions	46
3.3 Best Management Practices -- Road Closures	48

Work Area Group 4 – Deleted

Work Area Group 5 - Research

5.1 Coordinated Natural Resource Management Research.....	51
---	----

Work Area Group 6 - Education and Recreation

6.1 Implementing Public Information and Educational Opportunities on State Forests	53
6.2 Integrating Public Recreational Opportunities with Management on State Forest Lands ..	56
6.3 SFI Involvement and the Michigan State Implementation Committee.....	60

Work Area Group 7 - Integrated Implementation and Contracting

7.1 Timber Sale Preparation and Administration Procedures	62
7.2 Legal Compliance and Administration of Contracts	67

Work Area Group 8 - Training

8.1 MDNR Staff Training for State Forest Management	70
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Work Area Group 9 - Tribal Issues

9.1 Collaboration with Tribes in regard to management of State Forest Land	73
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Forest Certification Work Instruction**Date of Draft Document:****Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005**Work Instruction Title:** 1.1 Strategic Framework for Sustainable Management of State Forest Land**Work Area Group:** 1 – Plan, Monitor, and Review**Purpose:** To provide guidance for sustainable management on State Forest lands. Identify Work Instructions necessary to meet forest certification standards. Identify actions necessary for the implementation of Work Instructions within the DNR.**Work Instruction:**

- I. The DNR will prepare a Statewide Forest Management Guidance document that will provide forest management guiding principles, strategies, and goals. The document will also describe forest planning processes at three levels (state/department, ecoregion/district, and local/forest management unit (FMU)), and a multi-level management review system.

The document will be developed through an interdivisional effort of Wildlife, Fisheries, and Forest, Mineral and Fire Management personnel. It will be submitted and approved by the Statewide Council by August, 2005.

The Statewide Forest Management Guidance document will include the following:

1. Purpose and Use
 - 1.1 Part 525, Sustainable Forestry on State Forestlands
 - 1.2 SFI and FSC Certification Standards
 - 1.3 Use of this document in the context of other DNR initiatives
2. Vision and Mission for DNR-Managed Forest Lands
 - 2.1 Vision of Desired Future Conditions for DNR-Managed Forest Lands
 - 2.2 Mission for DNR-Managed Forest Lands
 - 2.3 Strategic Principles
 - 2.3.1 Ecological Principles
 - 2.3.2 Social-Economic Principles
3. Forest Administration and Authority
 - 3.1 Statewide Authorities – authority of divisions and the Statewide Council, processes and planning initiatives
 - 3.2 Eco-region teams – authority, processes and planning templates
 - 3.3 Districts and Management Units – authority, processes and planning templates
 - 3.4 DNR Land Management System

4. Operational Forest Management Guidance
 - 4.1 Ecological Guidance

- 1.1 Strategic Framework for Sustainable Management

- 4.1.1 Principle 1. Sustainable Ecosystem-based Management
 - Sub-Principle 1.1 Conservation of Geophysical Processes
 - Sub-Principle 1.2 Conservation of Biodiversity
 - Sub-Principle 1.3 Maintenance of Biotic Productivity
- 4.2 Social-Economic Guidance
 - 4.2.1 Principle 2. Maintenance of Essential Ecosystem Services
 - 4.2.2 Principle 3. Sustain Social-Economic Values
 - 4.2.3 Principle 4. Provision of Public Access
 - Sub-Principle 4.1 Recreational Opportunities
 - Sub-Principle 4.2 Educational Opportunities
 - Sub-Principle 4.3 Cultural Uses
- 5. Monitoring, Review, and Revision Processes
 - 5.1 Management Review Process
 - 5.2 Monitoring Process
 - 5.3 Other Monitoring Processes
 - 5.4 Revision Process

II. Use of Forest Certification Work Instructions

- a. The DNR has adopted the use of Forest Certification Work Instructions to guide the planning, operations, and review of management on State forest Lands. DNR Staff are instructed to follow these Work Instructions in the daily work. Following these instructions will allow the DNR to meet the requirements of sustainable forest management as defined in the SFI and FSC certification standards. Any revisions to the Work Instructions are to be approved by the Statewide Council following review by Division Management Teams.

b. List of Work Instructions

Work Area Group 1 Plan, Monitor, and Review

- 1.1 Strategic Framework for Sustainable Management of State Forest Land
- 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

Work Area Group 2 Forest Regeneration and Chemical Use

- 2.1 Reforestation
- 2.2 Use of Pesticides and other Chemicals on State Forest Lands
- 2.3 Integrated Pest Management and Forest Health

Work Area Group 3 BMPs

- 3.1 Forest Operations
- 3.2 Best Management Practices Non-conformance Reporting Instructions
- 3.3 Best Management Practices -- Road Closures

Work Area Group 4 This WAG was deleted - all related indicators were combined with WAG 7

Work Area Group 5 Research

- 5.1 Coordinated Natural Resource Management Research

Work Area Group 6 Education and Recreation

- 6.1 Implementing Public Information and Educational Opportunities on State Forests
- 6.2 Integrating Public Recreational Opportunities with Management on State Forest Lands
- 6.3 SFI Involvement and the Michigan State Implementation Committee

Work Area Group 7 Integrated Implementation and Contracting

- 7.1 Timber Sale Preparation and Administration Procedures

- 7.2 Legal Compliance and Administration of Contracts

Work Area Group 8 Training

- 8.1 MDNR Staff Training for State Forest Management

Work Area Group 9 Tribal Issues

- 9.1 Collaboration with Tribes in regard to management of State Forest Land

III. DNR Leadership Actions

To meet forest certification standards a variety of new initiatives need to be implemented within the DNR. Many of these new initiatives require the approval of DNR leadership. The following table lists the required DNR leadership actions necessary to implement the Forest Certifications Work Instructions.

Table 2. Required Leadership Actions

Action	Responsibility	Work Instruction
Appoint Statewide Planning Team	Statewide Council	Eco-regional Plan Development State-level Strategic Framework
Approve Work Instructions	Statewide Council	State-level Strategic Framework
Establish a Forest Advisory Committee	Director	Social Impact Considerations and Public Involvement Processes
Approve the Statewide Forest Management Guidance document	Statewide Council	State-level Strategic Framework
Appoint Eco-regional Planning Teams	Statewide Council	Eco-regional Plan Development
Delegate Emergency Road Closure Authority	Director	Road Closure
Approve Change in the Approval Process for Intrusive Operations	Statewide Council	Forest Operations
Dedicate Funding to Address BMP and Forest Regeneration Non-conformances	Division Chiefs	BMP non-conformance reporting and Reforestation
Implement Annual Management Review	Statewide Council	Management Review Process
Delegate Authority to Conduct Internal Audits	Statewide Council	Management Review Process
Authorize Surveillance and Certification Audits.	Director	Statewide Strategic Framework
Implement Annual Meetings with Federally Recognized Michigan Tribes	Statewide Coordinator for Tribal Issues	Tribal Issues
Appoint Statewide Biodiversity Planning Team	Statewide Council	Biodiversity Considerations on State Forest Lands
Dedicate Funding to Implement Biodiversity Survey Needs and Protection, Management, and Monitoring Measures	FMFM and WLD Division Chiefs	Biodiversity Considerations on State Forest Lands

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
State-wide Planning Team	Draft Guidance Document, communicate to Statewide Council, communicate to DNR following Statewide Council approval
Statewide Council, Director, Division Chiefs	Complete actions necessary for the implementation of Work Instructions within the DNR.
Field Coordinators, Basin, Peninsular, District and Unit Managers/ FMFM, FSH, & WLD	Ensure work instructions are fully implemented
District Planning and Inventory Specialists/ FMFM; District Ecologists, WLD	Provide oversight in implementing standards, monitoring and evaluating performance.
Ecoteams	Incorporate guidance into ecoregional plans
All MDNR Land Management Staff	To be knowledgeable of document and guidance contained therein and to ensure guidance is reflected in operations.

Training/Skills: (Those required to accomplish work instruction)

Item:	Brief Description of Skill or Course	Exists/ New
Planning, Monitoring, and Reviewing Processes	Inform employees of principles; review planning processes, monitoring templates and review processes.	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- Draft Staetwide Forest Management Guidance
- Part 525, Statewide Forest Resources Plan, of the Natural Resources and Environmental Protection Act, 1994 PA 451
- FSC & SFI Forest Certification Standards

Monitoring:

- The Forest Certification internal audits and external audits will determine DNR’s effectiveness in implementing sustainable forest management. This work instruction will be monitored and adapted based upon the results of these audits.

Records:

- Audit reports

Forest Certification Work Instruction**Date of Draft Document:****Effective Date:** June 20, 2005**Revision Number:** 0**Supersedes Version Dated:**

Work Instruction Title: 1.2 Management Review Process for Continual Improvement in the Management of Forest Resources**Work Area Group:** 1 – Plan, Monitor and Review

Purpose: A systematic process for gathering information regarding improvement in forest management practices, reporting that information to management, and formal management review.

Work Instruction:

1. Internal audit teams will be formed and will conduct regular audits on DNR forest management units. The audits will include field implementation of State and District level programs.
 - a. Eight internal audits will be conducted in 2005 within the same Forest Management Units (FMUs) included in the 2005 external forest certification audit.
 - b. Seven remaining FMUs will be internally audited in 2006
 - c. Thereafter, a three year rotation (5 FMUs per year) will be followed.
 - d. Supplemental internal audits can be requested through the chain of command.
 - e. The DNR Statewide Council will designate which FMUs and state forest related programs will be audited each year.
2. Annual Management Review.

The Statewide Council will conduct an annual management review to evaluate audit results for state forest operations, evaluate effectiveness of work instructions, evaluate non-conformances, and determine changes and improvements necessary to continually improve conformance. The review will be based on the following:

 - a. Internal Audits: Internal audits must record, evaluate, and report non-conformances with forest certification standards and related work instructions at all levels of the Department.
 - i. FMFM and WLD Field Coordinators will oversee the internal audit process in conjunction with the Forest Certification Coordinator.
 - ii. Internal audits will be conducted by DNR lead auditors.
 - iii. Monitoring requirements cited in the forest certification standards and work instructions will be incorporated into the internal audit process.
 - b. Annual Forest Certification Surveillance Audits by external SFI and FSC auditors
 - c. Field Management Review
 - i. Schedule the management review to follow annual forest certification audits.
 - ii. Management Review will consist of a review of audit results by peninsula. Audits will evaluate field operations and Department programs.
 - iii. Conduct an annual management review in the UP and the NLP. Meeting will be hosted and chaired by the field coordinators of FMFM and WLD. Fisheries Division will participate in the meeting. Ecoteams will also be represented at the annual management reviews.
 - iv. UP and LP field coordinators will prepare a joint draft report addressing conformance with the forest certification standards and recommendations for improvement. The draft report will be submitted to DNR division chiefs for review. Field Coordinators will incorporate division

management team review comments and submit a final report to the Statewide Council and the Forest Certification Implementation Team (FCIT).

- v. The conformance report will include a report of management actions immediately taken to address audit results, will site non-conformance issues, and report other significant findings.

3. Implementing Improvements:

- a. Whenever possible, immediate changes will be made to remedy identified non-conformances.
- b. The FCIT will be responsible for ongoing management review implementation and for recommending actions necessary to improve sustainable management of forest resources.
- c. The Statewide Council will identify changes and improvements necessary at all Department levels to continually improve conformance with work instructions via a written annual communication to all employees.
- d. Division Chiefs will ensure changes and improvements approved by the Statewide Council are implemented via written communication to employees.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Statewide Council	Conduct an annual management review, identify changes and improvements necessary to improve forest management. Designate which units or state forest related programs will be audited each year.
Internal Auditors	Conduct annual internal audits and recommend improvements to internal audit process.
Field Coordinators / FMFM, WLD, FSHD	Oversee internal audit process. Conduct annual management review in the UP and NLP. Prepare draft and final compliance reports. Implement changes and improvements into field operations.
Division Chief / FMFM, WLD, FSHD	Review draft compliance reports, provide recommendations for incorporation into final report. Implement improvements recommended at state and regional levels via written communications with employees.
FCIT	Coordinate ongoing management review implementation. Recommend actions necessary to improve sustainable forest management.
Forest Certification Specialist / FMFM	Oversee and support internal audit process.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Internal Auditor Training	Train select DNR staff in forest certification audit procedures to meet forest certification standards	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- Regional forest Stewardship Standard for the Lake States-Central Hardwoods Region
- Sustainable Forestry Initiative Standard, 2005-2009

Monitoring:

- Annual Compliance Reports
 - Annual Surveillance Reports
-

Records:

- Internal Audit Reports
 - Annual Compliance Reports
 - Annual Surveillance Reports
-

Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** June 20, 2005**Revision Number:** 0**Supersedes Version Dated:**

Work Instruction Title: 1.3 Ecoregional Plan Development**Work Area Group:** 1 – Plan, Monitor, and Review

Purpose: Define roles, responsibilities, and timeline for the development of Ecoregional State Forest Land Management Plans. Provide a document outline to follow when developing the Plans.

Work Instruction:

1. Ecoregional plan development will be carried out within the context of, and with consideration for Division, statewide, local, species-specific, and other DNR planning efforts. While the focus will be on DNR state forest lands within each ecoregion, conditions and trends within the broader ecoregion will be taken into account. It will serve as the process through which forest-related, state land management planning will be generated with public involvement. The planning documents, in turn, provide long-term, landscape-level direction to field managers to guide decision making at the Management Unit level.
2. The process will be most directly and immediately guided by the Ecoregional planning team. Collaboration with external parties (e.g. the Nature Conservancy, Michigan Natural Features Inventory, U.S. Forest Service, etc.) will be expected. Criteria and indicators (C & I) of sustainability reflecting forestry values will be developed through a public process. As part of this phase, metrics associated with the C & I will be identified, their collection and/or monitoring defined, and interpretations of metric values or parameters will be developed. Statewide C & I will be developed through coordination among the Ecoregional planning teams and DNR Lansing staff. Proposed ecoregional goal statements associated with the C & I metrics will be drafted. As part of this process and in preparation for plan development, resource assessments will be identified and completed.

Subsequent planning steps will entail preparing the plan with public involvement. They are tied to Plan document sections as follows:

- Complete Sec. 1 - Understanding the Ecoregion Forest Plan
- Complete Sec. 2 - Forest History
- Complete Sec. 3 - Current Forest Condition
- Draft Sec. 4 - Ecoregion Management Direction
- Engage the general public and focus groups in reviewing Section 4; hold a public comment period and redraft Section 4 taking into consideration the input
- Draft Sec. 5 - Special Resource Area Management Direction
- Complete Section 6 - Implementation, Monitoring, Review & Revision
- Complete Sec. 7 – Appendices, Sec. 8 – Glossary, and a Plan Summary
- Engage the general public and focus groups in reviewing the complete draft plan; hold a public comment period and redraft taking into consideration the input
- Submit final draft of completed plan to Division Management Teams and then to Statewide Council for approval.

3. The Eastern Upper Peninsula Ecoregional Plan will be completed by December 31, 2006. It will be followed by plans for the Northern Lower Peninsula Ecoregion and Western Upper Peninsula Ecoregion one year later. Both the Northern Lower and the Western Upper Peninsula Eco-teams may choose to pursue steps towards their planning efforts during the course of the Eastern UP's plan development in collaboration with the forest certification planners.

4. Subject to future revisions by the Statewide Council, the general outline of the Ecoregional plans should be as follows:
 1. Understanding the Ecoregion Forest Plan
 - a. Purpose & Use of the plan
 - b. Relationship to the State-wide Guidance Document and Organization of this Plan
 - c. Use of Criteria & Indicators
 - d. Plan Communications & Implementation
 - e. Location of the Ecoregion and boundaries of Division management units

 2. Forest History

 3. Current Forest Condition
 - a. General Land Cover and Forest Resource Base
 - b. Forest Health
 - c. Wildlife Conditions
 - d. Water and Fisheries Conditions
 - e. Socioeconomic Context

 4. Ecoregional Management Direction for State Forest Lands and programs
 - a. Definition of terms
 - i. Desired Future Conditions
 - Goals
 - Objectives
 - Standards
 - Guidelines
 - b. Stakeholder Relations
 - Tribal
 - c. Desired Future Conditions, Goals & Objectives, Indicators & Metrics
 - i. Special Resource Areas
 - (See Section 5)
 - ii. Recreation Management
 - Water Access Sites
 - Motorized & non-motorized Trails
 - Campgrounds
 - Scenery Management
 - iii. Vegetation Management
 - Biodiversity
 - Forest Products (timber & nontimber)
 - Wildlife
 - Fisheries
 - Rare Communities
 - iv. Watershed Management Soil Resources
 - Riparian Areas & Wetlands
 - v. Species of Greatest Conservation Need
 - Federal T & E Species
 - State T & E Species
 - Species of Special Concern
 - vi. Land Use Management

- Easements
- Special Use Permits
- vii. Minerals & Geology
 - Oil & Gas Development
 - Metallic & Non-Metallic Mineral Development
 - Unique Geologic Formations
- viii. Forest Pest Management
 - Insects
 - Disease
 - Invasive Species
- ix. Fire Management
 - Fuel Management
 - Prescribed Fire
 - Fire Prevention
 - Fire Suppression
- x. Land Ownership
 - Acquisition and Disposal
 - Boundary Designation (Signage)
- xi. Transportation System
 - Road Maintenance
 - Road Closure
- xii. Law Enforcement
 - Contract Enforcement
 - Illegal Activities (ORV use, Illegal Harvests)
 - Trespass

5. Special Resource Management Information- Maps, Standards and Guidelines

Introduction

- a. Natural Areas
- b. Rare Communities
- c. Riparian Management Zones
- d. Old Growth & Biodiversity Stewardship Areas
- e. Dispersed Recreation Areas
- f. Large Landscape Level Forests
- g. Habitat Corridors
- h. Natural Rivers
- i. Ecologically Sensitive Areas
 - i. Critical Dunes
 - ii. Springs and Wetlands
- j. Archaeological Sites
- k. Cultural Use Area
- l. Visual Management Areas
- m. Concentrated Recreation Areas
- n. Soil Limited Areas
- o. Restricted Access Areas (Slope)
- p. Restrictive Ownership Patterns
- q. Mineral Resource Areas
- r. Road Closure Areas

6. Monitoring, Review & Revision

- a. Relationship to Management Review System

7. Appendices

8. Glossary

A Plan Summary will be developed upon completion of the plan

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: Michigan lands other than State-owned

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
All DNR personnel within an Ecoregion	Participate in the planning process as a resource to the Ecoregional Planning Team. Implement the plan through on-the-ground operations.
FMFM Inventory and Planning Specialists & Wildlife Ecologists	Document and summarize the revisions to ecoregional planning process and assist with the development and review of the ecoregional plans through the Ecoregional Planning Teams.
Other specialists	Assist with the development of particular plan sections pertaining to specialty.
Regional Ecoteam	Oversees the ecoregional planning process. Coordinates DNR ecoregional input and public input into plan development. Review and draft ecoregional plan and present to Statewide Council. Responsible for plan monitoring and recommending revisions to the plan and implications for DNR operations. Responsible for communicating and coordinating with DNR staff within the ecoregion and Ecoregional Planning Team.
Ecoregional Planning Team: Wildlife Mgt Unit Ecologist (WE) FMFM Inv. & Planning Specialist (IPS) Lansing FMFMD Cert. planners (FCP) Lansing WLD Cert planner (WCP) FSDH representative	Create Ecoregional plans: WE and IPS – Liaison between FCP/WCP and Ecoteams, Draw on field-based Division resources to write and compile local sections of plan and integrate with statewide components. FCP/WCP – Draw on Lansing and other Division resources to write statewide components of plans and compile with ecoregional sections. Assures compliance with legislation and compatibility with certification requirements.
Statewide Planning Team	Review draft eco-regional plans for consistency and their content/direction compatibility with other plans. Responsible for monitoring and analyzing the 3 plans to ensure they are meeting statewide objectives and directions.
Statewide Council (SWC)	Appoints Ecoteams, the Statewide Planning Team, and approves the planning process, the final draft Ecoregional Plans, and future revisions.
DNR Director	Approves the Ecoregional Plans.

Training/Skills: (Those required to accomplish work instruction)

Item:	Brief Description of Skill or Course	Exists/ New
Familiarity with OI, FIA, & T-Sale Data;	Good computer skills with databases	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
GIS/Analysis Skills	ArcView/ArcInfo	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Models/Modeling	Skills or knowledge of resource models and modeling	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Facilitation Training	Facilitate meetings with stakeholders-internal and external	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Plan process	Review planning process with Department staff	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- Draft ecoregional planning timeline
- Draft review and revisions to the ecoregional planning process
- Draft Statewide Forest Management Guidance Document
- Part 525, Statewide Forest Resources Plan, of the Natural Resources and Environmental Protection Act, 1994 PA 451

Monitoring:

- Reporting, monitoring, analyzing, and adapting management would take place at all 3 levels-FMU, Ecoregion, and Statewide. Monitoring of the ecoregional planning process will be the responsibility of the ecoteam and the statewide planning team. Specifics of this will be outlined in Section 6 of the plan.
- Subsequent review and revision of the process will be the responsibility of the ecoteams, statewide planning team and Statewide Council.

Records:

- C&I measurements and reports
 - Public comments
 - Public meeting notes and comments
 - SWC documented approvals
 - Maps and background documents
 - Analysis results
 - Draft and final plan documents
-

Forest Certification Work Instruction**Date of Draft Document:****Effective Date:** August 19, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005

Work Instruction Title: 1.4 Biodiversity Management on State Forest Lands**Work Area Group:** 1 - Planning, Monitoring, Review

Purpose: To provide direction for addressing biological diversity conservation objectives.

Work Instruction:

The intent of this work instruction is to provide direction for cataloging areas within the state forest that have been identified for a variety of biodiversity values. It is also intended to provide management options that are compatible with conservation objectives.

I. Definitions:

Biological Diversity: *means the full range of variety and variability within and among living organisms and the natural associations in which they occur. Biological diversity includes ecosystem diversity, species diversity, and genetic diversity.* NREPA, Part 355, PA 451, 1994 as amended.

Special Conservation Areas (SCAs) Special Conservation Areas are areas of state forest land that have had one or more conservation objectives, interests, or elements identified. Conservation objectives listed in the SCA category have been identified through a variety of methods and mechanisms, and it is important to understand how the objective was determined. The type and strength of recognition—and possible management options—will vary depending on the process used to identify the conservation value. For example, some objectives are detailed in the Land Use Orders of the Director (force of law) while other may be identified through cooperative agreements (administrative direction). There are also objectives developed through department process or agreement i.e. deer yards, potential old growth (POG), and riparian buffers. The SCA category may also be used to document areas identified by an external group or organization, such as National Audubon Society's Important Bird Areas Program.

The SCA definition is purposefully broad to encompass a spectrum of conservation interests and elements. It is a descriptor that provides the land manager and/or stand examiner with natural resource information to make informed management decisions.

High Conservation Value Areas (HCVAs) (including ERAs on state land) are areas that have been recognized for their contribution to specific conservation values, objectives and ecological attributes or significant social values. Examples of a recognized DNR process¹ include legislation, administrative rule, Director's and Natural Resource Commission Orders. Examples of existing HCVAs include Dedicated Natural, Wilderness or Wild Areas, Natural Rivers, species recovery plans such as Kirtland's Warbler

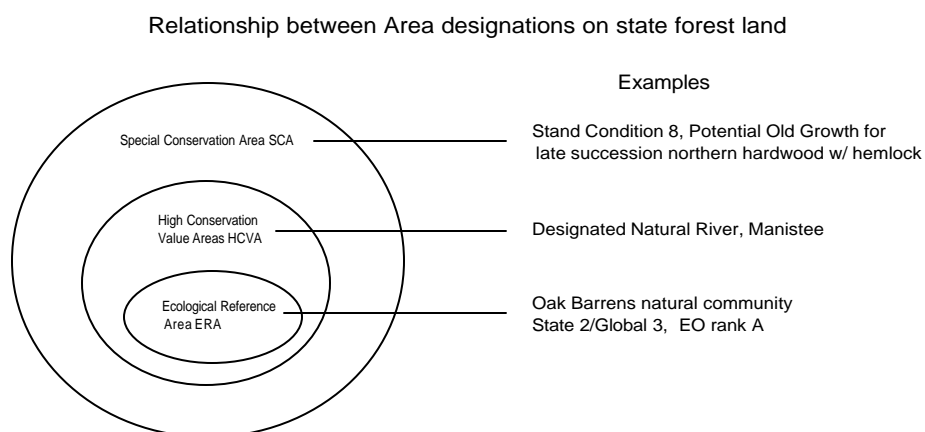
¹ Although an important public process, Open House/Compartment Review will not be a final approval forum for designating HCVAs and ERAs. It will be a key process for identifying potential conservation areas. The Biodiversity Conservation Planning process—which has a broader platform--will be used to review potential conservation areas.

Management Areas, and critical dune areas. Typically, HCVAs are a subset of SCAs on state forest land that have had significant public participation and/or public review as part of the process. New HCVA areas will be designated using the approved Biodiversity Conservation planning process.

Ecological Reference Areas (ERAs) serve as models of ecological reference within the state and may be located on any forest land ownership. They are high quality examples of functioning ecosystems that are primarily influenced by natural ecological processes. The initial set of ERAs is based on Michigan Natural Features Inventory’s current database of known high quality natural community sites (See Conservation Area Management Guidance). The initial set of ERAs are natural communities that have a Global (G) or State (S) Rank of endangered (1), threatened (2) or rare (3)², and have an Element Occurrence (EO) Rank A or B (the site is an ”excellent or good” examples of the natural community). Additional ERAs will be identified through the Biodiversity Conservation planning process. All ERAs on state forest land are, by definition, High Conservation Value Areas.

The ERA, HCVA and SCA designations are nested. These three categories quickly organize areas with conservation objectives or values into Ecological Reference Areas, High Conservation Value Areas and Special Conservation Areas.

Figure 1.



II. Management Direction:

Forests are managed for a broad array of biological, ecological, social and economic benefits, values, goals and objectives. Strategic and long term planning that includes biological diversity conservation is addressed through the DNR Operational Management Guidance document and DNR planning processes. Biodiversity conservation objectives and determinations are conducted at several scales (State, eco-regional, and/or FMU/Compartment), identified in several categories (Special Conservation Areas, High Conservation Value Areas, and Ecological Reference Areas), and are linked through planning and operational activities.

² Natural Community Rank and Element Occurrence in Michigan are determined by Michigan Natural Features Inventory using internationally recognized heritage methodology developed by The Nature Conservancy and used by NatureServe.

It is the responsibility DNR land management staff to understand the intent of the SCA identification as well as the implications for management activities. **All SCAs should be coded as Stand Condition 8 in Operations Inventory.** This will provide a single location to document conservation elements in the inventory.

1. Identified SCAs, HCVAs and ERAs will be managed to conserve, protect, maintain, and/or enhance their defined conservation objectives or values. The management methods used will vary depending on the objective and type of designation.

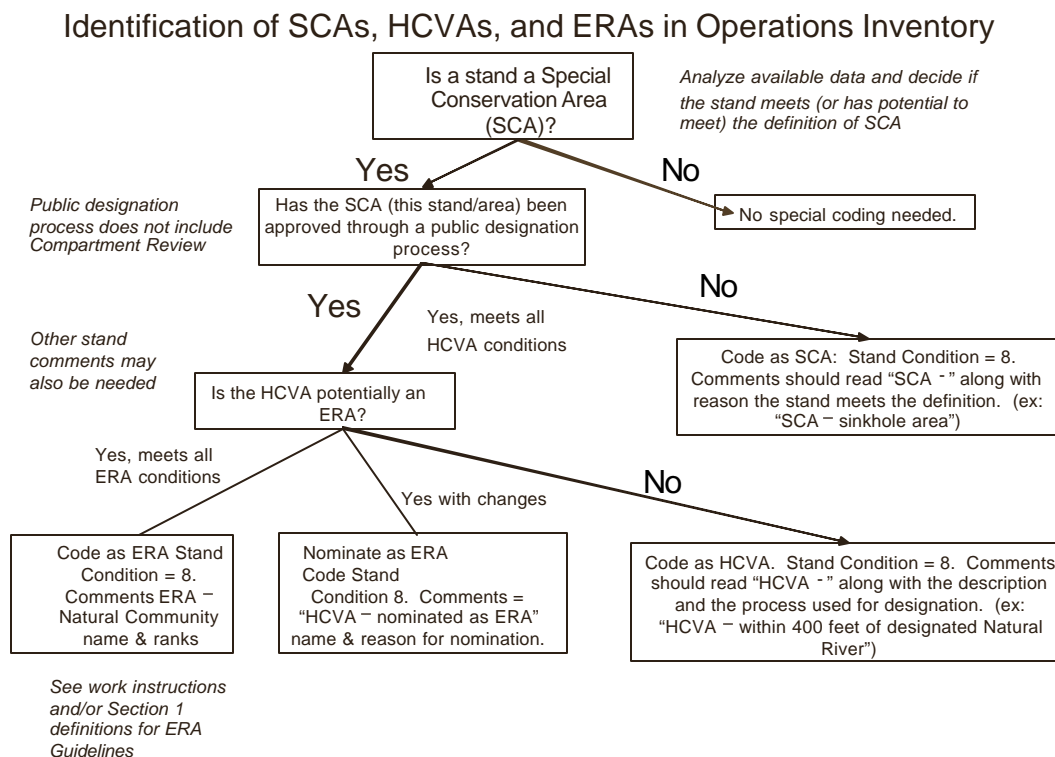
On DNR-managed lands, Ecological Reference Areas may be protected through a variety of mechanisms (refer to Conservation Area Management Guidance). Management activities or prescriptions in Ecological Reference Areas are highly restricted to those that maintain or enhance the defined attributes and values and protect the immediate natural resource values or human health and safety.

2. Potential Old Growth (POG) Management Direction: No vegetative treatments shall occur in areas currently identified in the Operations Inventory (OI) database as Stand Condition 8, potential Old Growth, (Year of Entry prior to 2008) until these stands are assessed in the context of SCAs, HCVAs and ERAs. However, activities that protect immediate natural resource values (such as control of invasive species pests and wildfire suppression) or human health and safety may be undertaken using DNR procedures (refer to OI Manual Chapter 7, D. Post-Review for guidance) (Table 2)

III. Instruction for Compartment Review:

Use the following template to identify and code SCAs, HCVAs and ERAs.

Figure 2.



1. Prior to the initiation of field inventory, use the above definitions and references below to determine if an area is or has potential to be a Special Conservation Value (SCA), High Conservation Value Area (HCVA) or Ecological Reference Area (ERA).
 - a. If no, special coding is not required.
 - b. If yes,
 - i. In the OI database use Stand Condition 8 to flag the stand.
 - ii. Change Influence Zone (IZ), Area Class (AC) and/or Special Management Area Potential (SMAP) as appropriate to reflect conservation objective.
 - iii. In OI Comments list the category (SCA, HCVA, ERA) class, name and other comments. Include the conservation objective. Use Conservation Area Coding, Appendix B, Conservation Area Management Guidance document for coding direction.
 - iv. Determine and apply management guidelines from the Conservation Area Management Guidance document.

2. If an area or stand is currently classified in the OI database as Stand Condition 8, Potential Old Growth:
 - a. Confirm that Stand Condition is listed as 8.
 - b. Change Influence Zone (IZ), Area Class (AC) and/or Special Management Area Potential (SMAP) OI fields as appropriate to reflect conservation objective.
 - c. In OI Comments identify the proposed listing or specific conservation objective. For POG clearly state the objective. Example: “POG, late succession mesic northern forest with hemlock in understory”, or “POG, stand adjacent to designated quiet area, possible buffer”. Use Conservation Area Coding, Appendix B, Conservation Area Management Guidance document for coding direction.
 - d. Determine management guidelines from the Conservation Area Management Guidance document.
 - e. If the POG objective is no longer relevant, the stand examiner may, through the Compartment Review process and with sign off through the Field Coordinator level, remove the POG identifier. Change coding appropriately.

3. If there is an area or stand that may have significant biological diversity potential but is not currently classified in the OI database as Stand Condition 8:
 - a. Record the area as Stand Condition 8 in the OI database.
 - b. In OI Comments identify specific or proposed conservation objective using Conservation Area Coding Appendix B, Conservation Area Management Guidance document for coding direction.
 - c. Determine management guidelines from the Conservation Area Management Guidance document.
 - d. Forward the information to the Biodiversity Conservation Planning Team for further review.

4. Prior to the initiation of field inventory, determine if area contains occupied habitat for threatened, endangered, or special concern species (plants and animals), or Species of Greatest Conservation Need (SGCN) (animals, fish).

Determine from MNFI web application, element occurrence database, species and community abstracts, and, MNFI Compartment Review Comments, Michigan Wildlife Conservation Strategy and other habitat models (see references).

- a. If yes, determine how existing management guidelines or agreements influence management decisions and incorporate into treatment prescriptions (see references and/or contact the Endangered Species Coordinator, Wildlife Division or Fisheries Division representative for reptiles and amphibians.).

- i. Record information in Operations Inventory locked Comments.
 - b. If there is evidence that an area under consideration may contain these elements
 - i. Propose survey work for T&E and special concern species only. Forward request to Forest Resources Management Section Manager through the Forest Management Unit Manager.
 - ii. Record information in Operations Inventory locked Comments.
- 5. Determine biodiversity management guidelines for the natural communities/cover types under consideration for management using MNFI web application, element occurrence database and species and community abstracts, Michigan Wildlife Conservation Strategy, Silvicultural Guidelines, and other habitat models (see references).

Determine how proposed management action may impact the area and identify specific elements that protect, maintain or enhance biodiversity, e.g. snags, coarse wood debris, edge, perches. (see “Dead Wood” in References section).

- a. Record in OI Comments
- b. Add biodiversity specifications to timber sale specifications and Forest Treatment Proposals.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: MNFI
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
State Biodiversity Conservation Planning Team	Statewide biodiversity assessments, planning and review, and make final recommendation on HCVAs and ERAs.
Eco-Team/All Divisions	Regional biodiversity assessments and planning
Unit Manager and District Planner/ FMFM; Wildlife Habitat Biologist and Wildlife Ecologist / WLD; Fisheries Biologist/FD	Compartment/FMU biodiversity assessments, planning, and operations
Stand Examiner/FMFM	Identification of elements
Michigan Natural Features Inventory/MSUE	Analysis, identification and management guidance of elements of biodiversity
Endangered Species Coordinator/WLD: Fisheries representative for reptiles and amphibians	Analysis, identification and management guidance and permitting for elements of biodiversity
Program Specialists: Natural Areas, WLD Natural Rivers, FSD	Management guidance of natural areas and natural rivers
Conservation Officers/LD	Enforcement on special sites (HCVA, ERA, Natural Areas)

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Biodiversity Approach	Training on biodiversity approach	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Biodiversity Assessments	Training on myriad of assessments	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

Biodiversity Guidelines	Training on related community management guidelines	<input checked="" type="checkbox"/> E	<input type="checkbox"/> N
Community & Elements	Training on recognizing Michigan natural communities and elements	<input checked="" type="checkbox"/> E	<input type="checkbox"/> N
Special Site Management	Training on natural rivers and natural areas management	<input checked="" type="checkbox"/> E	<input checked="" type="checkbox"/> N

References:

Federal Law:

Wilderness Act of 1964 (16 U.S.C. 1131-1136, 78 Stat. 890) - Public Law 88-577
 Wild and Scenic Rivers Act of 1968 *P.L. 90-542, as amended*(16 U.S.C. 1271-1287)

State Law:

Natural Resources and Environmental Protection Act, PA 451, 1994, as amended
 Part 005 General Powers and Duties
 Part 305 Natural Rivers
 Part 351 Wilderness and Natural Areas
 Part 355 Biological Diversity Conservation
 Part 525 Sustainable Forestry on State Forestlands

DNR Policy & Procedures

Natural Resource Commission Policy
 2207 – Management of State Forests
 2703 –Natural Rivers
 2704 –Wilderness and Natural Areas
 2706 – Sand Dune Management and Protection—Department Operations

Biodiversity Conservation Planning Proposal and flowchart, April 2005

Forest Mineral and Fire Management

Policy 441, Operations Inventory and Compartment Review Procedures
 Operations and Inventory Manual, March 2004 as revised including Marzolo email of 2/28/2005,
 Resource Assessment Process Flow Chart, April 2002
 Conservation Area Coding

Conservation Area Management Guidance

“Dead Wood” Guidelines for Managing Dead Wood to Enhance Biological Diversity on State Forest Lands, memorandum from Gerald Thiede, George Burgoyne, April 17, 1996.

Natural Areas Program Strategic Plan, March 29, 2000. Michigan Department of Natural Resources, Natural Heritage Program, Wildlife Division Lansing, MI 16 Pp. Adopted By DNR Management Team 2000.

Operational Management Guidance for State-Owned Forest Lands

Proposed Old Growth and Biodiversity Stewardship Planning Process and Draft Criteria for Michigan’s State Forests and Other State Owned Lands, February 8, 2001 - Note: this is the precursor to the Biodiversity Conservation Planning Proposal and includes previous direction from the Old Growth on State Forest

Lands, addendum to the Statewide Forest Resources Plan of 1983; Identifying potential old growth in operations inventory, Burns, H. March 15, 1995; and other information.

Silvicultural Guidelines

State Forest Management Plan

Department Programs

Endangered Species Program, Wildlife Division
Natural Areas Program, Wildlife Division
Natural Rivers Program, Fisheries Division
Parks Stewardship Program, Parks and Recreation Bureau

Cooperative Agreements/Grants/MOUs

Partnership between DNR, The Nature Conservancy and the Michigan Natural Features Inventory, Michigan State University Extension to survey for, compile and update information on threatened and endangered species and high quality natural communities in Michigan.
Michigan Department of Natural Resources, Michigan Wildlife Conservation Strategy, Natural Heritage Program, Wildlife Division
Partnerships between the US Fish and Wildlife Service and Wildlife Division for the management of wildlife, fish and federally listed endangered and threatened species.

Electronic or Geographic Information Data

Spatial data library
FMFM biodiversity information layer
OI database and maps
Eco-regional plans: biodiversity management area maps (as applies)
Michigan Natural Features Inventory (MNFI)
Web Application
Element Occurrence Database
Community Abstracts
Habitat models (under development)
U.S. Fish & Wildlife Service species recovery plans
http://ecos.fws.gov/tess_public/TESSWebpageRecovery?sort=1
The list of Michigan Federal Endangered and Threatened Species in Michigan is on the DNR Forest Certification web page.

Other Information and Resources

Burger, T. and J. Kotar. 2003. A guide to forest communities and habitat types of Michigan. University of Wisconsin, Madison, WI
Michigan Department of Natural Resources
Michigan Wildlife Conservation Strategy. 2005. Michigan Department of Natural Resources, Wildlife Division
Michigan GAP models - Donovan, M. L., G. M. Nessler, J. J. Skillen, and B. A. Maurer. 2004. The Michigan Gap Analysis Project Final Report. Wildlife Division, Michigan Department of Natural Resources, Lansing, MI. 184 + Appendices.
Interim Guidelines for Mesic Conifers in the West UP included in Herman, K, and M. Joseph, T. Oliver, D. Wagner, H. W. Scullon, J. Ferris, D. Kuhr. April 16, 2004. A process for implementing Mesic conifer restoration on state land, Western Upper Peninsula, Michigan. Michigan Department of Natural Resources, Marquette, MI. 38 pp.
Draft Red Pine Project Report. Jan 2004

1.4 Biodiversity Management on State Forest Lands

Monitoring:

Monitoring biodiversity and compliance with this Work Instruction will be done through a variety of mechanisms.

1. Prior to the Year of Entry (YOE) data revision/update deadline (which results in “freezing” OI or the “frozen” database inventory), Land management staff and District Planners will ensure that all stand comments, ‘limiting factors’ and stand condition codes are compatible.
2. An annual report of management activities approved through the compartment review process that incorporate biodiversity considerations will be compiled. Reporting will be coordinated through District Planners and the FMFM Inventory Specialist.
3. On an annual basis, FMUs will report on the number of HCVAs and ERAs contained within compartments reviewed. A summary table for each FMU will report on the management activities approved for HCVA/ERA within the compartment review process for that year.
4. Annual internal audits will include reviews of stand level biodiversity considerations.
5. Ecoregional planning reports will include biodiversity criteria and indicators in addition to describing SCAs and setting and monitoring targets in the ecoregion.
6. Department-wide review and documentation of biodiversity will be conducted as part of the Biodiversity Conservation Planning process.

Records:

Operations Inventory database of State forest lands, maintained at state-wide level and recorded at local level (stands within a compartment), records of ERAs, HCVAs, and SCAs (Stand Condition #8). The database will include conservation objectives and crosswalk with protection and management directives.

GIS data layers and maps for ERAs, HCVAs, SCAs and multiple biodiversity elements including dedicated and proposed Natural Areas, potential old growth, threatened and endangered occurrences, dedicated Natural Rivers and special management areas.

Compartment Review packets and meeting documents.

Monitoring reports (see Monitoring section)

Forest Certification Work Instruction

Date of Draft Document:**Effective Date:** June 20, 2005**Revision Number:** 0**Supersedes Version Dated:****Work Instruction Title:** 1.5 Social Impact Considerations and Public Involvement Processes**Work Area Group:** 1 – Plan, Monitor, and Review**Purpose:** Outline the existing and new means by which social impacts are considered and public involvement processes occur for State Forest management.**Work Instruction:****1. Policy:****A.** NRC Policy 2207 regarding management of State Forests states the following:

- “The Department shall consider all the values of forest resources.”
- “The Department shall manage the total forest system under a management concept which will yield a combination of products, services and total values to meet the economic and environmental needs of present and future generations. All important products of forest resources – timber, fish and wildlife, minerals (including oil and gas), recreation, environmental, and aesthetic values – shall be given fair and equitable consideration.”

Such fair and equitable considerations will be a part of normal business at all DNR administrative levels from the Management Unit through the District level to the State level. This includes social impact considerations. Evidence of social considerations is to be a part of documents pertaining to everyday activities (e.g. inventory and treatment decisions) and special reports (e.g. Wildlife Conservation Strategy, Biodiversity Stewardship, and Ecoregional Plans).

B. NRC Policy 1005 (Public Involvement in Activities of the Department) assures social impact considerations through public involvement processes. The general policy begins with:

“Citizen participation and interest in the activities of the Department shall be encouraged in all possible ways. Attention to citizen questions, inquiries, complaints, and requests shall be considered a principal duty by employees at all levels.”

C. NRC Policy 1022 and the accompanying Procedure 1022.2 provides for the appointing of special task forces, study groups, and committees. These are to be

“...used on all possible occasions to develop proposals and recommendations on significant issues, problems and procedures facing the Department. The subject with which the group is to deal must be specific and clearly defined so that positive recommendations can be made. Time limitations and completion dates shall be carefully outlined. Membership must be limited to a workable size, and the time of a sizable number of people should not be unduly requested. All appointments are by the Director or Deputy Directors.”

The procedure for forming a Special Task Force, Study Group, or Committee by a Bureau Chief, Regional Director, Division or Office is spelled out in Procedure 1022.2

Recent examples of special task forces, study groups, and committees include the DNR Land Review Team, Commercial Use of State Land Work Group, ORV Work Group, the Wolf Management Work Group, and the Keweenaw Point Advisory Committee.

D. DNR Administrative Procedure 17.01.03 addresses DNR Employees' involvement with stakeholder and public working groups (ISSUED: 05/24/2005). It further reinforces the role of public involvement in stating:

- "The Department believes that citizen advisory committees and stakeholder working groups encourage citizen participation in government and are helpful to agencies in decision-making and in developing approaches to new and existing programs."

It requires:

- "When a Department of Natural Resources public work group (e.g., DNR Hunter Recruitment and Retention Work Group) includes a communication component (public meetings, brochures for the public, etc.), the Office of Communications must be notified or contacted."

In turn, the Office of Communications is required to

- inform the DNR Management Team of the formation of work groups that involve and engage stakeholders and other DNR constituencies.
- coordinate and/or plan a communications strategy, as necessary, with divisions/offices and DNR employees who participate in the work group.
- ensure that the Office of Communications maintains a database of current work groups and their members.

2. Forest Management Unit Level:

A. The Compartment Review (CR) process is open, public, advertised, and communicated through web postings and informational mailings. Both existing uses and possible future uses of the State Forest are evaluated through this process (OI manual, Chapter 7). Social impacts are considered through the evaluation of public comments as they relate to the compartment review process. Specific topics that are identified in the Compartment Review include:

- Management goals
- Ownership patterns, development, and land use in and around the compartment
- Archeological, Historical and Cultural features
- Special management designations or considerations
- Mineral resource and development concerns and/or restriction
- Vehicle access
- Recreational facilities and opportunities
- Wildlife and Fisheries management considerations

There are three formal opportunities to gather public comments during the compartment review process including: participation in the annual FMU open house, comments submitted via the FMU web page or directly to the FMU staff, and direct participation at the compartment review. Unsolicited comments can be submitted at any time prior to the compartment review and will be considered.

All written comments received will be presented at the compartment review and will be made part of the permanent record of the compartment. Minutes of the compartment review will include a summary of

justifications for changes to prescriptions, and will document consideration given to comments received from the public.

B. Special interest and ad hoc meetings with the public are conducted as needed. Written records will be kept by the DNR lead contact.

3. EcoRegional/District Level:

A. Social Criteria and Indicators (C & I) data will be developed and monitored as part of the ecoregional planning process (see Ecoregional Plan Development Work Instruction). While Ecoteams will incorporate additional C & I of local interest, a statewide core set will be identified, tracked, and reported on at the state level. Examples of C & I identified by the EUP Ecoteam include stability of land use, spiritual and aesthetic values, local and community economic health and trends, and the legal and institutional framework for ecosystem management. While many of these are the same as the longstanding list of categories incorporated in the Compartment Review Summaries, these are being developed through a public input and review process. The tracking and reporting of the C & I lend further structure to social (and biological) impact evaluation.

B. Social values will also be considered through the public involvement processes in the development of ecoregional plans. This process will incorporate a minimum of two public meetings and an additional comment period during the time the plan is developed and before the final draft is submitted to the Statewide Council for approval. (See Ecoregional Plan Development Work Instruction).

C. Social values and impacts will be considered as part of special projects which cross FMU boundaries. Recent examples include the Chocolay Snowmobile Trail, Keweenaw Point Management Plan, ORV and Snowmobile Plans, Mullet Lake to Cheboygan Trail... Both internal and external expertise will be secured to assist in such assessments. Meeting notes, correspondence, and recommendations of committees or groups affiliated with such projects will be retained by the designated DNR lead.

4. State or Division Level:

A. Natural Resources Commission Policy 1005 includes the following direction:

1. A portion of each public meeting of the Commission shall be set aside for citizen appearance. All other commissions, boards, councils, and other advisory bodies associated with the Department shall do likewise.
2. Public hearings and meetings shall be held when increased input from the public is needed, as well as when legally required. These shall be held at times and places convenient to the public, adequate notice shall be given, and reasonable effort be made to provide the public with Information on the issue involved.
3. As time permits, employees shall attend and participate in both formal and informal meetings of organizations which have environmental and natural resource concerns.
4. Full cooperation shall be given to the Governor, Legislature and other governmental agencies in furthering the principle of public Involvement

B. The DNR Forest Management Advisory Committee is being established to advise the Director of the DNR. The purpose of the Committee is to assist the DNR in balancing environmental, social and economic issues while carrying out the DNR's forest resource management responsibilities. The Committee will provide a mechanism whereby interested persons can play an advisory role in the formation of DNR priorities and practices. It will also:

- Identify potential long-term threats to forest resources in the State.
- Describe economic and environmental opportunities that are linked with forest resources.
- Address management problems, opportunities and challenges related to public and private forest ownership.
- Provide active participation in the DNR’s forest resource planning activities, including forest certification efforts.
- Identify appropriate partnerships with other agencies that impact Michigan’s resources.

Membership will include DNR staff, forest industry organization representation, university personnel, other government agency representation, conservation and environmental organizations, and other interested parties as determined by the DNR Director. This committee will also evaluate the need for additional social impact evaluations.

C. Many other statewide advisory committees exist, examples include:

- Snowmobile Advisory Committee,
- ORV Advisory Board,
- Recreational Trails Program Advisory Board,
- Citizens Waterfowl Advisory Council,
- Hunter Recruitment and Retention Work Group,
- Michigan State Parks Citizens’ Committee

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: Michigan lands other than State-owned

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Stand Examiners	Consider social impacts of DNR operational activities and document in inventory databases, Compartment Review (CR) Summaries and Compartment Review meeting notes.
FMFM Inventory and Planning Specialists	Assure social impact considerations are documented in inventory databases, CR Summaries and CR meeting notes.
Regional Ecoteams and Ecoregional Planning Teams	Identify, track, review and report social C & I; consider and/or develop recommendations for operations based on social and other impacts. Include public meetings and input opportunities during ecoregional plan development. (The Ecoregional Planning Teams will conduct much of this work while the Regional Ecoteams oversee and review their work.)
Unit Managers, District Supervisors, program staff, Field Coordinators, Division Chiefs, Deputy Directors	Assure both social considerations and public involvement processes are incorporated and properly documented in recommendations and decisions; meet with natural resource-related organizations on matters of concern; propose special task groups or committees to address issues as needed and assist such groups as requested
DNR Forest Advisory Committee	Assists the DNR Director in balancing environmental, social and economic issues in carrying out the DNR’s forest resource management responsibilities

Training/Skills: (Those required to accomplish work instruction)

Item:	Brief Description of Skill or Course	Exists/ New
Identification of Social Impacts	Ecoregional and FMU processes that identify, track, and report impacts (some old, some new)	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- NRC Policy 1005 – Public Involvement in Activities of Department
 - NRC Policy 1006 – Department Position – Presentation at Hearings and Meetings
 - NRC Policy 1022 and DNR Procedure 1022.2– Appointing Special Task Forces, Study Groups and Committees
 - NRC Policy 2207 and related DNR Procedure 2207.7 – Management of State Forests
 - Administrative Procedure 17.01.03 – DNR Employees’ Involvement with Stakeholder and Public Working Groups
 - Draft Statewide Forest Planning Guidance Document, 5/3/05
 - Part 525, Statewide Forest Resources Plan, of the Natural Resources and Environmental Protection Act, 1994 PA 451
 - FMU Analyses and Ecoregional Plan Development Work Instructions
 - Implementing Public Educational Opportunities on State Forests Work Instruction
-

Monitoring:

- Reporting, monitoring, analyzing, and adapting management take place on an ongoing basis at all 3 levels-FMU, Ecoregion, and Statewide.
-

Records:

- C&I measurements and reports
 - Public comments
 - Public meeting notes and comments
 - Eco-team and SWC documented approvals
 - Maps and background documents
 - Analysis results
 - Draft and final plan documents
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Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Date:** June 20, 2005

Work Instruction Title: 1.6 Forest Management Unit Analyses**Work Area Group:** 1 – Plan, Monitor, and Review

Purpose: Develop and use GIS layers, maps and tabular data to link compartment information and stand-level decisions to broader FMU landscape issues, including forest type acreage and age class trends.

Work Instruction:

1. FMU maps and tables will be developed through GIS analysis by the Forest Certification Resource Analyst. They will be used in the Compartment Review process and displayed on FMU web pages.
 - A. The maps and tables to be developed are based on the following items that are currently covered in Compartment Review Summaries:
 - i. Soil and Topography
 - ii. Ownership patterns, development, and land use in and around the compartment
 - iii. Unique, natural features
 - iv. Archeological, Historical and Cultural features
 - v. Special management designations or considerations
 - vi. Watershed and fisheries considerations
 - vii. Wildlife Considerations
 - viii. Mineral resource and development concerns and/or restrictions
 - ix. Vehicle access
 - x. Survey needs
 - xi. Recreational facilities and opportunities
 - xii. Fire protection

In addition to these existing Compartment Review Summary categories, maps and information will be developed pertaining to forest health concerns, regeneration activities, socioeconomic data, and forest type trends. The FMU information will be available and reviewed as appropriate throughout the Compartment Review decision-making process.

B. Where possible, the FMU analyses will be prepared within the IFMAP GIS environment to enable ongoing refinement and integration with our future GIS-based inventory system. The Resource Analyst will work with the IFMAP Inventory Technical Group to assure this integration occurs. FMU analysis information will be reviewed by FMFM Planners, WLD Ecologists and Biologists, FMU staff and the FMFM Webmaster. The Silviculture and Regeneration team will review FMU analyses pertaining to forest types, treatments, and projections based upon prescriptions. Unit Managers will approve FMU web site postings

FMU information will be sent out as it is completed. To enable access and comparisons across FMUs, initially, all products will be posted on a share drive, pushed out to FMU servers (or burned onto CDs when requested), and incorporated into IFMAP. Descriptions of the analysis (data layers and methodology) need to accompany the products. Layers and training for their use will be made available to FMU staff.

The Certification Resource Analyst will maintain the data layers, notify Units, Planners, Ecologists, and Timber Management Specialists of updates subsequent to the initial round of analyses, and lead an annual review of the processes and products.

2. FMUs will conduct a pre-inventory review of the next year-of-entry compartments. The FMFM Unit Manager will schedule and coordinate the meeting with the District FMFM Planner and Wildlife Division Ecologist. The review should utilize the above FMU information and other data to put the year-of-entry compartments into a long-term, landscape level perspective. Examples include an analysis of forest type acres and their age classes (or basal area), Special Conservation Areas (see Biodiversity Work Instruction) and considerations, tribal interests, public input, and other broad resource information. Timber Management Specialists will generate and provide major cover type trends and projections of age classes and harvests developed from historical and current inventory and timber sale information. As goals are developed and approved at the ecoregional level or changed at the division level, projections based upon timber treatment prescriptions will be contrasted against such goals.
3. Following the completion of forest inventory data collection, and prior to the pre-review (after post stage 2 meeting in IFMAP), the Timber Management Specialist will develop age class and harvest projections and report preliminary implications of prescriptions for each FMU. Similar to the pre-inventory review, the projections will address what will result if proposed prescriptions are followed. Forest trends will be re-projected prior to posting on the website, and will be available for the compartment review. Subsequent to the compartment review, forest trends are again re-projected if there are any changes.
4. Each Unit is responsible for working with the Division Web Master to develop and maintain their Unit's web page which will contain general statements about the Unit's relative uniqueness, forest activities (e.g. recreational opportunities), history, and/or other social/economic/biological characteristics and links to the FMU information under #1 above. No information will be posted without Unit Review first. Disputes or conflicts with respect to postings will be resolved by the normal chain of command.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: Michigan lands other than State-owned
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
FMFM Certification Resource Analyst	Identify GIS layers and develop FMU analysis, maps, tabular products and brief narratives corresponding to Compartment Review Summary categories. Distribute to field offices through appropriate means and train personnel in their derivation and use. Assist as requested with posting of information on web pages.
Planning and Inventory Team (FMFM Planners, Inventory Specialist, WLD Ecologists and Biologists, and related Lansing staff)	Review analyses and assist in formatting and training for FMUs and help develop subsequent management review at FMU, District, and State levels. Assist FMUs in interpretation of analyses and any follow-up.

Timber Management Specialists	Develop projections and preliminary implications of prescriptions for FMU.
Silviculture and regeneration team	Review projections and tables pertaining to forest types and future inventories predicated upon current prescriptions.
Stand Examiners, other FMU personnel, WLD Ecologists and Biologists and FMFM Planners	Review new FMU analysis information and any ecoregional planning concerns prior to field exam. Following compilation of prescriptions, consider their implications for future forest conditions (e.g. age class).
FMU representatives	Work with FMFM Webmaster to incorporate and maintain information on web pages.
FMFM Web Master/Liaison	Work with Units and Certification Resource Analyst to develop and manage web pages.
FMU Unit Manager	Assure review of information at FMU level including documentation of considerations and designate FMU staff to assist in the development of web pages incorporating information. Schedule pre-inventory review.
Ecoregional Planning Team and Regional Ecoteam	Monitor FMU operational performance year-to-year with respect to C & I and ecoregional plan. Note successes, discrepancies and new concerns; report to Districts and Divisions. (Most of this work to be done by the Ecoregional Planning Team which reports to Regional Ecoteam for their review.)

Training/Skills: (Those required to accomplish work instruction)

Item:	Brief Description of Skill or Course	Exists/ New
Describe FMU Analyses	Documentation accompanying maps and layers sent to Units	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
On-site, FMU training	FMUs, esp. those to be audited, need to demonstrate knowledge and understanding of analyses (Unit Managers, Stand Examiners, FMFM Planners, Cert. Resource Analyst)	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Review FMU Analyses	District Specialists need to review the analyses derivation and uses	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
GIS/Analysis Skills	ArcView/ArcInfo	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- Biodiversity Considerations on State Forest Lands Work Instruction
- Strategic Framework for Sustainable Management of State Forest Land Work Instruction
- Ecoregional Plan Development Work Instruction
- Social Impact Assessment and Public Involvement Processes Work Instruction
- OI Manual Chapter VII, "Compartment Reviews"
- Forest Management Unit Compartment Review Presentation form
- Draft Statewide Forest Management Guidance Document, 5/3/05
- Draft Comp Review Summary Items with GIS Layers Identified and Prioritized document
- Part 525, Statewide Forest Resources Plan, of the Natural Resources and Environmental Protection Act, 1994 PA 451

Monitoring:

- Reporting, monitoring, and analyzing of performance to take place at all 3 levels-FMU, District, and Statewide with subsequent management adaptations at the FMU level.

Records:

- Constructed GIS layers
- Maps, tables and background documents for use by FMU and web postings
- Open house and compartment review meeting notes and comments

Maps and background documents

Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** June 20, 2005**Revision Number:** 0**Supersedes Version Dated:**

Work Instruction Title: 1.7 State Forest Timber Harvest Trends**Work Area Group:** 1 – Plan, Monitor, and Review

Purpose: To prepare a report for the Chief of the Forest, Mineral and Fire Management Division describing recent Michigan State Forest timber harvest trends and the factors which influence them. The report will serve to develop reasonable expectations with respect to future State Forest timber harvest levels and provide a basis for management review and reporting on timber harvest levels.

Work Instruction:

1. The Planning and Operations Unit Leader shall meet with the State Silviculturist to discuss the Michigan State Forest Timber Availability and Harvest Trends report outline, agree upon a timetable and tasks, and direct the Silviculturist to begin work on the project.
2. At a minimum, the resulting report shall include the following:
 - a. Background and purpose of the analysis and paper, including references to current timber supply concerns and forest certification, and descriptions of past projections.
 - b. Methods and data sources employed in the analysis.
 - c. The current timber sale treatment decision processes and anticipated changes.
 - d. Tables and descriptive information describing past and likely future trends by administrative unit, forest type, products and treatments.
3. Through the above items, the paper will address:
 - a. The need and appropriateness of developing realistic expectations with respect to future timber harvests in contrast to past projections emphasizing what was biologically possible.
 - b. The compartment review treatment decision process and rationale for the rate of annual harvest and species selection.
 - c. The sustainability of State Forest harvest levels, identifying factors that influence sustainability and future harvest levels.
 - d. DNR plantation management.
 - e. Changes to the information management systems (e.g. VMS and IFMAP).
 - f. Current and anticipated timber-related management costs.
 - g. Tables and reporting to assess future harvest levels.
4. The report will give consideration to ongoing managerial review of timber trends and include items that are legislatively required.

5. Subsequent to the initial report, on an annual basis, forest conditions and harvest trends will be reviewed and contrasted against the descriptions in the report by the Timber Management Specialists, the Timber Sale Program Leader, the State Silviculturist, and the Inventory Specialist and others as deemed appropriate to determine the need to update or revise the report.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Planning and Operations Unit Leader/FMFM	Draft Document Outline and Analytical Steps, Assemble Data
State Silviculturist/FMFM	Conduct Analysis and Develop Draft Report; Modify as Appropriate Following Review
Timber Management Specialists/FMFM; Timber Sale Program Leader, Inventory Specialist and others as deemed appropriate, including FMFM Mgt Team, FMFM & WLD Dist. Specialists	Review outline and subsequent Report
Others as deemed appropriate, including FMFM Mgt Team, FMFM & WLD Dist. Specialists	Review Report
FMFM Certification Planner/FMFM	Incorporate excerpts of report into 2005 Management Plan

Training/Skills: (Those required to accomplish work instruction)

Item:	Brief Description of Skill or Course	Exists/ New
Familiarity with OI, FIA, & T-Sale Data; past projections	Planning & Operations Unit Leader to Provide to State Silviculturist	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- Draft Statewide Forest Management Guidance Document
- Part 525, Statewide Forest Resources Plan, of the Natural Resources and Environmental Protection Act, 1994 PA 451
- 11/10/99 Silvicultural Needs Analysis and related documents
- Michigan’s Forest Resources: Direction for the Future, MDNR 1983 Plan
- Michigan’s Forests 1993: An Analysis
- Michigan’s Predicted Timber Yields 1981-2010
- USDA Forest Service Forest Inventory & Analysis data (available on “FIA Mapmaker” website)

Monitoring:

- Statewide Planning Team (when established)
 - Forest Condition Spreadsheets: Acres, Age class
 - Management Review System
-

Records:

- T-Sale Data
 - OI and IFMAP stand and compartment coding
 - OI forest cover maps
 - USDA Forest Service Forest Inventory & Analysis data
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Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005**Work Instruction Title:** 2.1 Reforestation**Work Area Group:** 2 – Forest Regeneration and Chemical Use**Purpose:** To define forest regeneration requirements on State Forest Land.**Work Instruction:**1. Desired Future Condition:

Forest regeneration will contribute to a distribution of successional stages, age classes, and community types at the appropriate scale and intensity. Silvicultural practices will encourage regeneration that moves the stand toward its desired future condition as determined by the management objective agreed to at compartment review. Broad genetic and species diversity as well as the ecological impacts of planting must also be considered.

Reforestation of difficult to regenerate stands or endemic species will be a consideration when a stand is prescribed for harvest. Stand examiners need to make comments in the narrative section of Operations Inventory (OI) reflecting an acceptable species mix should the stand not regenerate to the management objective and this must be agreed to at compartment review. If type conversion occurs without this pre-approval, after-the-fact approval is acceptable. Stands that can not be regenerated to the desired management objective or approved alternative will not have a regeneration harvest prescribed. When desirable advanced regeneration is present within a stand, comments should be included in OI that will lead to the inclusion of relevant timber sale contract specifications and the retention of this regeneration. Management guides and [FMFM Reforestation policy](#) should be consulted in these regards as needed. Any regeneration work prescribed and approved will be documented on a Forest Treatment Proposal (FTP) Form [R4048](#) in accordance with the reforestation policy.

2. Indication of Regeneration Method:

Forest inventory codes will be used to determine if a stand will be artificially or naturally regenerated. [The OI manual](#) provides guidance, beginning with the method of cut (MOC) section of the manual.

3. Exotics:

The [FMFM Reforestation policy](#) addresses the planting of exotic (non-native) species. While the practice is discouraged and minimized, it is not prohibited. The same policy also outlines the documentation required for completion of the Forest Treatment Proposal Completion Report ([R4048-1](#)), which is required for all plantings, whether exotic, improved or from another source. All of the plantings must be summarized annually using the Planting Summary ([R4046](#)). The Forest Health Specialist in conjunction with the Nursery Manager (tree improvement specialist) and Timber Management Specialist (TMS) is responsible to insure all stock meets policy and legal guidelines. These individuals shall also monitor or participate in any testing or application of improved planting stock or bioengineered species.

4. Timing and Adequacy of Regeneration:

Stands prescribed for final harvest will be regenerated within two growing seasons from the date of the timber cutting report if it is regenerating artificially and within five years if regenerating naturally. A timber cutting report is the document that concludes a Timber Sale Contract.

Whenever a timber cutting report is generated, the contract administrator will update OI. The reforestation clock for regenerating the stands contained within the sale will begin when contract is completed. The Unit Manager will be responsible for the preparation and updating of regeneration lists. Those requiring TMS assistance will be forwarded to the TMS as requested, but at least twice during the year. TMS will be required to provide any available regeneration information, such as shape files, regeneration counts, and FTP Completion Reports ([R4048-1](#)) before regeneration lists and OI can be updated.

The TMS will be responsible for completing artificial regeneration within two growing seasons of when the timber sale cutting report was completed or for documenting reasons for non-compliance. This regeneration must be the same type or species mix as agreed to at compartment review. If conditions after harvest are such that regeneration to the approved management objective cannot be obtained, the TMS must seek a change in management objective by going through the post review (change) process outlined in the [OI manual, Chapter 7](#).

Minimum stocking levels will follow the [FMFM Reforestation policy](#) or Silvicultural Guidelines, whichever is more stringent.

5. Regeneration Monitoring:

Naturally regenerating stands will be checked by year 4 (4 years after the timber cutting report is completed) to determine if regeneration has been successful. Unit Managers will be responsible for tracking these stands and initiating follow up action in consultation with the TMS by the end of year 4. Artificially regenerating stands will be checked in accordance to the [Forest Regeneration Survey Manual](#) or by year 2. Unit Managers are responsible for all reforestation activities on the Unit, however the TMS shares in the responsibility for those stands forwarded to them.

All stands that are prescribed for a regeneration harvest will be progressively sampled. At a minimum each stand will be walked through and checked for adequate regeneration as defined by policy, the [Forest Regeneration Survey Manual](#) and the OI manual. The walk through should be well distributed and cover at least 10 percent of the stand area. If regeneration is estimated to be inadequate, a formal survey will be conducted as outlined in the [Forest Regeneration Survey Manual](#). Unit Managers will be responsible for the walk through surveys and for coordinating corrective actions. The TMS will support this effort by making formal survey personnel (either contractors or students) available to conduct the formal survey and to provide program expertise to insure consistency. Oversight and documentation of these surveys will be the responsibility of the Unit Manager. Survey results must be recorded in OI comments and coding updates. Stands that are found inadequately stocked will be artificially regenerated according to the management objective of the stand as previously described. Plans to accomplish artificial regeneration must be initiated by year 5 if the stand was originally prescribed for natural regeneration. Once the decision is made to switch to artificial regeneration (to be done before the end of year 5), the OI coding will be updated to reflect artificial regeneration and the reforestation clock is updated to reflect a two year artificial regeneration deadline. The TMS assumes responsibility for regenerating the stand once the decision to regenerate artificially has been made.

Regeneration of stands that were treated in previous years must be checked during OI. Stands where accurate seedling count information does not exist and a harvest or cultivation treatment has been completed will be progressively sampled as described above. If necessary the stand may be prescribed for a regeneration count or other cultural work as needed.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Unit Manager / FMFM	Supervise pre-harvest inventory, determination of stand management objective, and maintenance of related records.
Stand Examiners / FMFM and/or WLD	Conduct pre-harvest inventory, make preliminary stand prescriptions, perform initial natural regeneration assessment, and maintain records.
Timber Management Specialist / FMFM	Supervise & implement artificial regeneration activities, supervise formal artificial and natural regeneration surveys, and provide related records to Unit Managers.
Sale Contract Administrator / FMFM	Protect advance natural regeneration and start the regeneration clock.
Nursery Manager (tree improvement specialist) / FMFM	Ensure that planting stock conforms to policies and legal guidelines.
Forest Health Specialist / FMFM	Recommend regeneration practices that minimize forest health impacts, and ensure that planting stock conforms to policies and legal guidelines.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists / New
OI coding training	Provide clarification and training in coding (paragraph 1 comments)	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Regeneration survey training	Contents of Forest Regeneration Manual	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Knowledge of work instruction	All managers and supervisors with responsibility to implement this work instruction.	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Reforestation Data Base	Use of local reforestation database	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
		<input type="checkbox"/> E <input type="checkbox"/> N

References:

- Act 451 1994
- [NRC Policy 2204](#)
- [FMFM Policy 241](#)
- [FMFM Policy 251](#)
- [OI manual](#)
- IFMAP Manual
- [Forest Regeneration Survey Manual](#)

Monitoring: See section 4 of work instruction (below).

Records:

Completed records are kept in compartment files. Records to include:

- Forest Treatment Proposal (FTP) Form [R4048](#)
- Forest Treatment Proposal Completion Report Form [R4048-1](#)
- Planting Summary Form [R4046](#)
- [reforestation database](#)
- reforestation sampling records.

Forest Certification Work Instruction
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Date of Draft Document:

Effective Date: August 5, 2005

Revision Number: 1

Supersedes Version Dated: June 20, 2005

Work Instruction Title: 2.2 Use of Pesticides and Other Chemicals on State Forest Lands

Work Area Group: 2 – Forest Regeneration and Chemical Use

Purpose: To define best management practices for use of pesticide on State Forest Lands.

Work Instruction:

1. Prescriptions: Minimize pesticide use to achieve management objectives. Use alternatives to chemical pesticides when they are legal, reasonably cost effective, and available and meet management objectives. When chemical pesticides are used, select the least-toxic, narrowest spectrum products labeled for the target species. Choose chemicals from the attached list of DNR approved products for use on State Forest lands. The list includes only chemicals meeting FSC criteria and labeled for use in Michigan. New additions to the list must be approved by the Forest Health, Inventory and Monitoring Unit Manager.) Follow the procedures outlined in Policy 592, Pesticide Use, section D.3.a for making pesticide prescriptions.
 - a. When a Forest Treatment Proposal (FTP)(R-4048) requiring a pesticide application is approved, complete a Pesticide Application Plan (PAP, R-4029). Attach the PAP to the FTP. The PAP must include personal and environmental safety precautions, potential environmental effects, and the location of any environmentally sensitive areas, including threatened or endangered species and species of special concern.
2. Operational use of pesticides:
 - a. Certification of Applicators: All DNR personnel directly involved in the application of pesticides will be certified as pesticide applicators by the Michigan Department of Agriculture, Pesticide and Plant Management Division (Policy 592). As a general rule, non-certified personnel are discouraged from participating in pesticide applications. If non-certified individuals are involved with pesticide use applicable Worker Protection Standards shall apply.
 - b. Application and Evaluation: Pesticide applications are accomplished with either DNR staff or contract applicators. Upon completion of a pesticide application, complete a Forest Treatment Completion form (FTC, R-4048-1) and an attached Pesticide Use Evaluation Report (PUER, R-4029-1). For herbicide applications, complete Section 8 of the Pesticide Use Evaluation Report during the growing season following treatment. (Pesticide use at nurseries and tree improvement centers does not require use of FTP, FTC, PAP, or PUER forms.) Also, keep records in accordance with the 1992 worker protection standards for agricultural pesticides.
 - c. Pesticides used must be labeled for the intended use and used within the label requirements.
 - d. Buffer strips: Riparian and other buffers must be clearly identified. Aerial applications should parallel buffer strips. Use the following table as a guide to establish buffers along riparian areas.

Interim recommended Buffer distances in feet*			
Type Feature	Application Method		
	Aerial (ft)	Ground-Based Mechanical (ft)	Ground- Based Manual (ft)
Occupied Dwellings	200	150	100
Seasonal Dwellings	100	100	100
Human Drinking Water Sources	100	50	25
Stock Water Sources	50	25	10
Active Streams, Lakes, Ponds, & Major Waterways ¹	100	100	100
Flowing Ditches & Intermittent Streams ¹	100	100	100
Farm / Crop Lands	25	10	5
Public Roadway ²	15	10	5

¹Buffer on water features may be zero for applications of pesticides with aquatic labels. Natural River zoning requirements must be complied with.

²Buffer distances measured from edge of road surface; if right-of-way width exceeds buffer minimum, the right-of-way takes precedence.

*adapted from International Paper ISO 14000 Standard

- e. Personal safety: Personal protective equipment must be used as specified on product labels. Incidents of worker exposure to pesticides must be documented on the Pesticide Application Report.
- f. Work-related pesticide illness shall be reported to: Occupational and Environmental Medicine, Michigan State University, 117 W. Fee Hall, E. Lansing, MI 48824-1315, 1-800-446-7805
- g. Emergency procedures: Spill kits must be carried on DNR equipment and contractor's equipment whenever pesticides are being transported or applied. Absorb spills that create noticeable pool or puddles with absorbent pads. Collect contaminated absorbent material in a labeled impermeable container and store them to prevent contact with other liquids. Spill kits should be adequate for the volume of pesticides on hand. Spill kits are available from most industrial safety supply sources. Typical contents include absorbent socks, pillows or pads, protective gloves and a leak-proof bag to dispose of contaminated materials. Contact state officials to determine procedures for reporting, handling, and disposing of contaminated soil or other materials: Michigan Pollution Emergency Alerting System (PEAS): 800-292-4706.
- h. Access Control: Restrict access to pesticide treatment areas and prevent inadvertent exposure of employees and the public using guards, locked gates, signs, or trucks blocking the road. When treating near roadside buffers or during road maintenance applications, a "rolling road-block" may be used, whereby escort vehicles signal the spray vehicle to shut off while traffic passes.
- i. Notification (Policy 592): The need for public notification is determined at the Forest Management Unit and reviewed by the FMFM District Supervisor (note: training element: use PAP to describe notification plans) Need is evaluated within each of the following categories:
 - i. Public risk. The possibility of adverse exposure to a pesticide.
 - ii. Public concern. Perceived problems relating to the use and/or exposure to pesticides.
 - iii. Public relations and education. Used to inform the public of decision criteria and decision-making processes involved; and to involve the public in the decision-making process if appropriate.
 - iv. If need for public notification is established, notification will consist of one or all of the following:
 - 1. Signing. Signs should include the following information: Re-entry information, pesticide used, date of application, and phone/address of Forest Management Unit. Signs will be posted at time of application and removed at the end of the field season.

2. News media Used primarily for broad scale aerial applications, and where applications are highly visible.
3. Personal contacts. Where individuals, organizations or situations warrant extra efforts involved.

j. Spraying State-owned rights-of-way: Rights of way vegetation control is conducted through Special use Permits (PR 1138E) granted to the lessee (easement holder). The permit documents detail chemical products that will be used, rates, methods, specific areas of application and signing and notification requirements. The permit application is then reviewed by the Forest Health Specialist and approved by a Forest Management Unit Manager before a permit is granted. Michigan Department of Agriculture is notified of the spraying schedule and conducts on-site inspections of equipment and application rates.

k. Storage, Transportation and Disposal of Pesticide (Policy 592): Only pesticides needed for the current or next fiscal year will be purchased. The storage and transportation of pesticides shall meet all state and federal guidelines, as indicated on the label. Storage of unused and surplus pesticides is discouraged. All rinsate and residue should be applied as per label instructions. If necessary, unused pesticide must be disposed of in a manner consistent with labeling.

Pesticides approved for use on State Forest Lands

Product or common name	Active ingredient
	2,4D
	Captan
	Thiram
Bravo	Chlorothalonil
Dimlin	Diflubenzuron
Envoy	Clethodin
Garlon	Triclopyr
Oust	Sulfometuron methyl
Plateau	Imazapic
Roundup, Accord, other glyphostae formulations	Glyphosate
Tordon 101	Picloram
Velpar	Hexazinone

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Forest Health, Inventory, and Monitoring Unit Manager	Approve new additions to the list of chemicals meeting FSC criteria and labeled for use in Michigan.
Timber Management Specialist / FMFM	For silvicultural practices: Review FTP's, write PAP's, supervise herbicide applications, perform PEUR
Forest Health Specialist/ FMFM	For forest insect and exotic species control: Review FTP's, write PAP's, supervise applications including contract applications, perform PEUR
Pesticide applicator / DNR	Apply or administer contract application of silvicultural herbicides.
Other involved staff	Assist in the handling, storage, transportation, access management, or treatment evaluation of pesticide treatments.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Certified Pesticide Applicator, Michigan Dept. of Agriculture?	All DNR staff directly involved in pesticide application must have a valid State of Michigan certified pesticide application license.	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Worker Protection Training	DNR staff involved in the handling, storage, transportation, access management, or evaluation of pesticide treatments must be certified or have federally mandated Worker Protection Training.	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Knowledge of Work Instruction	All managers and supervisors with direct responsibility to approve pesticide use.	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- FMFM Pesticide Use Policy Number 592, October 26, 1999
 - Personal protective equipment: <http://www.epa.gov/oppfead1/safety/workers/equip.htm>
 - Worker Protection Standards, basic principles: <http://www.epa.gov/oppfead1/safety/workers/principi.htm>
 - Worker Protection Standards, full document: <http://www.epa.gov/pesticides/safety/workers/PART170.htm>
-

Monitoring:

Upon completion of a pesticide application, a Forest Treatment Completion form (R-4048-1) and an attached Pesticide Use Evaluation Report (R-4029-1) is completed by the Timber Management Specialist or Forest Health Specialist.

Records:

- Forest Treatment Proposal (R-4048) filed in the Forest Management Unit Offices
 - Forest Treatment Proposal Completion Report (R-4048-1) filed in Forest Management Unit Offices
 - Pesticide Application Plan (R-4029) filed with the FTP in the Forest Management Unit Offices
 - Pesticide Use Evaluation Report (R-4029-1) filed with the FTP in the Forest Management Unit Offices
 - [Pesticide Application Report](#)
 - Worker protection training records
 - Special Use Permit (PR 1138E)
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Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005

Work Instruction Title: 2.3 Integrated Pest Management and Forest Health**Work Area Group:** 2 – Forest Regeneration and Chemical Use

Purpose: To describe procedures to protect forest health using Integrated Pest Management (IPM) and wildfire suppression.

Work Instruction:

- 1) Responses to specific forest health issues like gypsy moth, emerald ash borer, and oak wilt are managed by the Forest Management Unit with technical direction and advice from the Forest Health Management Program Leader in cooperation with the Forest Health Monitoring Program Leader, USDA-FS, Michigan Department of Agriculture, other state, and federal agencies as needed.
- 2) Fire protection and management is accomplished under the FMFM Protection Program area including wildfire suppression, prescribed burning, and assistance to local fire departments.
- 3) Insects and disease. The following silvicultural guidelines to reduce timber losses to insect and disease using non-chemical methods are derived from a combination of forest health research, common practice, Timber Sale specs (VMS, 2005) and silvicultural guidelines addressing a range of forest health issues.
 - a) Utilize slash restrictions in red pine stands that are at risk for bark beetle infestations. Sale condition 5.2.15 is an example.
 - b) Specify seasonal operating restrictions on timber sales as per sale condition 5.2.13.
 - c) Do not leave a residual jack pine overstory over younger jack pine in areas where jack pine budworm is a potential hazard.
 - d) Plan harvests to avoid or reduce losses to insect outbreaks such as pine bark beetle (*ips pini*), spruce budworm or jack pine budworm.
 - e) Avoid planting red pine where sweet fern is present to minimize problems from Saratoga spittlebug.
 - f) Attempt to match cover type species selections to the site using habitat types (Burger and Kotar, 2003) as a guide to site suitability.
 - g) Schedule sanitation harvests out of entry year as need is and documented by Forest Health Specialists for insect problems such as emerald ash borer in ash or two-lined chestnut borer in oak.
 - h) On the subject of use of non-native tree species for reforestation FMFMD Policy 241 states, “Natural native species will be preferred whenever satisfactory survival and growth can be achieved. Non-native species and hybrids may be considered when there is no indication that they will displace other native flora more aggressively than would the native alternative species used for reforestation.” (MDNR, 1999)
 - i) Direct control measures of forest pests are coordinated by the Forest Health Management Program Leader. Observations of forest pests are reported using the Forest Health Field Report (Form R-4029-3) whenever they are observed.
- 4) Chemical use. Control measures utilizing chemical pesticides or bio-control agents are to be prescribed and applied under the supervision of a Forest Health Management Program Leader or his designee. This applies to controls of insect pests or invasive exotics. (see Chemical Use Work Instruction)

- 5) Invasive exotics.
- “Invasive non-native plants will not be used on public lands, mandated restoration projects or recommended for use on private lands” (DNR 2001).
 - Consideration should be given to the potential spread or increase of invasive exotic species in the planning and operational stages of all treatments. FMFM Forest health specialists will provide direction and advice to the FMUs in regard to control of invasive exotic species. Non-chemical methods will be the preferred method used to control and /or decrease invasive exotic species when ever possible. Chemical methods may be used alone or in combination with non-chemical methods as needed, (see Chemical Use Work Instruction).

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Forester, Forest Technician / FMFM	Prescribe and administer harvest treatments.
Timber management specialist / FMFM	Review harvest prescriptions. Conduct regeneration treatments.
Wildlife biologist, Wildlife Technician / WLD	Review forest treatments, prescribe other specific habitat manipulations, may conduct treatments.
Forest Health Specialist (Forest Health Monitoring Program Leader & Forest Health Management Program Leader/ FMFM	Provide forest health training and coordination of responses to pest outbreaks, including invasive exotic plant species. Coordinate with Michigan Department of Agriculture. Provide program specific roles.
Unit Manager / FMFM	Oversee application of this work instruction at the forest management unit level
Fire officer / FMFM	Implement fire protection program and conduct prescribed burns.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists / New
Forest health update	Annual forest health updates and workshops conducted by Forest Health Specialists. (Forest Health Monitoring Program Leader & Forest Health Management Program Leader)	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- MDNR, 1999. FMFMD Policy 241, Reforestation
- Forest Health Field Report, R-4029-3
- Burger, T and Kotar, J. 2003. “Guide to Forest Communities and Habitat Types of Michigan”.
- VMS, 2005. MDNR, VMS timber sale management software, sale specific conditions.
- Chemical Use Work Instruction
- DNR Position Statement For Native Plants In Resource Management, 05/24/01

Monitoring:

- Forest health monitoring
 - Pest surveys
 - Emerald Ash Borer monitoring
 - Beech Bark Disease monitoring
-

Records:

- Forest Treatment Proposal (R-4048) filed in the Forest Management Unit Offices
 - Forest Treatment Proposal Completion Report (R-4048-1) filed in Forest Management Unit Offices
 - Forest Health Highlights Report
http://www.michigan.gov/documents/2004ForestHealthHighlights3_116430_7.pdf
-

Forest Certification Work Instruction**Date of Draft Document:****Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005

Work Instruction Title: 3.1 Forest Operations**Work Area Group:** 3 – Best Management Practices (BMP's)

Purpose: To ensure consideration of major environmental factors in all operations on State Forest lands.

Work Instruction:

Operations on the State Forests lands will protect:

- water-quality,
- rare, threatened, and endangered species,
- special (cultural, ecological, geological, and historic) sites,
- Site productivity

Operations review: FMFM, Fisheries, and Wildlife Divisions will review and approve all intrusive operations performed or permitted by any DNR division on State Forest lands at appropriate level(s), and these approvals will be documented. Examples of intrusive operations include cutting or removal of vegetation (including negotiated sales), dredging, and road construction. Where timely, operations will be reviewed in the annual compartment review process. In the absence of an appropriate form or letter that provides an opportunity for FMFM, WLD, and FSHD to sign off, the Forest Treatment Proposal may be used to document approvals. Completion of operations will also be documented in a form available to the approving divisions (the Forest Treatment Completion Report may be used for this purpose).

Water quality: The operating division will be responsible for protecting water quality, and will document potential impacts as part of the operations approval process. The current Michigan water-quality Best Management Practices manual (Water-Quality Management Practices on Forest Land, 1994) will be the standard guide for water-quality protection in State Forest operations. The manual will be used as a guide for such operations, and appropriate professional expertise will be used to adjust the recommendations of the manual to ensure protection of water quality as defined by relevant laws and regulations. Road and trail construction or maintenance contracts will require compliance with BMP standards. BMP manuals will be provided to all such contractors. A spill kit, or access to sufficient absorbent material to clean up spills, is required at sites with State-owned vehicles having hydraulic equipment or auxiliary fuel tanks.

Species & ecological site protection: Most forest operations are reviewed by the Natural Heritage Unit of Wildlife Division or Michigan Natural Features Inventory (MNFI) as a matter of course. For forest operations that are not reviewed by the Natural Heritage Unit or MNFI, the operating division will have the lead responsibility including coordination with the DNR endangered species coordinator for the protection of rare, threatened, and endangered species and special ecological sites, and will document the potential impacts as part of the operations approval process.

Cultural, geological, and historic sites: The State Historic Preservation Office of the Department of History, Arts, and Libraries is the State authority for identifying and protecting cultural, geological, and historic sites. For forest operations that are not reviewed by the State Historic Preservation Office of the Department of History, Arts, and Libraries, the operating division will take the lead in ensuring the protection of these as part of the operations approval process. Incorporation of Tribal concerns will also be considered per the Tribal work instruction.

Site Productivity: Forest Operations shall strive to maintain forest and soil productivity, and avoid excessive soil disturbance. Minimize the loss of soil and site productivity, and modify soil management techniques if soil degradation occurs.

Documentation of the location of areas of concern: Relevant waters, species, and special sites shall be shown on maps and/or on the ground sufficient to guide the application of protection measures.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
All Department Staff	Obtain approvals for all intrusive operations from FMFM, WLD, and FSHD
All Department Staff	Identify and protect sites of special concern

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
BMP training	Identification of BMP water quality issues & their remedies.	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Training on T&E species and special ecological sites	Identification and protection of T&E species and of sites of special concern	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Training on special cultural, historic, geologic sites	Identification and protection of sites of special concern	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- Federal: Section 319 of the Clean Water Act, Coastal Zone Management Act of 1972 as amended in 1996.
- State: Natural Resources and Environmental Protection Act of 1994; part 91, Soil Erosion and Sedimentation Control; and part 301, Inland Lake and Streams.
- DNR Policy: Sale and Removals of Timber, policy and procedure No. 251 as approved March 1, 2000.
- FMFM Policy 251A Sales and removal of timber visual management,
- FMFM Policy 251 Sales and removal of timber
- DNR Operational Guidelines:
 - DNR/DEQ Water Quality Management Practices on Forest Land/Forestry Best Management Practices Manual.
 - Operation Inventory Manual.
 - Evaluating Riparian Management Zones on State Lands
 - Vegetative Management Systems (VMS)
 - Timber Sales Administration handbook.

Monitoring:

- FTP Proposals and completion reports
 - Timber sale proposals and completion reports
 - Land Use permits (special use permits, well site permits, seismic permits, etc)
 - Endangered species permits
-

Records:

- FTP completion reports
 - Land use permit records
 - Timber sale proposals
 - OI prescription sheets
 - MNFI Compartment Remarks
 - SHPO Compartment Remarks
 - Timber sale inspection forms
 - Endangered species permits
-

Forest Certification Work Instruction

Date of Draft Document:**Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005**Work Instruction Title:** 3.2 Best Management Practices Non-Conformance Reporting Instructions**Work Area Group:** 3 – Best Management Practices**Purpose:** To encourage, capture, and respond to public and internal reporting of BMP problems.**Work Instruction:**

DNR employees are required – and other citizens and visitors are encouraged – to watch for and report BMP problems in State Forests (see water quality management practices checklist). Reporting responsibilities include water quality and site productivity issues. Employees should endeavor to monitor problem-prone areas on a systematic basis.

Public reports should be received and recorded at any DNR office and directed to the local FMFM office for archiving and response. Additionally, private citizens may report BMP problems through a DNR website (under development), or by using a toll free telephone number (1-800-474-1718). Contact information for public reporting will be made available to the public in appropriate manners. Information that applies to other than State Forest land should be referred to the appropriate landowner or other responsible party.

DNR employees must report problems using a non-conformance report form. This information will be sent to the FMFM Unit Manager who is responsible for the site. The Unit Manager is responsible for recording and tracking all BMP problems reported.

Information reported should include:

- Date of observation
- Name of reporting person
- Phone number and/or email of reporting person
- Weather conditions at time of observation
- Exact location of the problem, with latitude and longitude, if possible
- Name of the wetland water body affected, if available
- Name of the road or trail involved, if available
- Nature of problem
- Seriousness of the original problem (urgent, high, medium, low)
- Immediate action taken to correct the problem, if any
- Remaining seriousness of the problem (urgent, high, medium, low, none)
- Suggested additional action needed

This information should be entered into an office or FMU-level database in a format that includes a unique identifier to each report and which can be summarized at the State-level for budgeting, planning, and

management review purposes. This database should also include fields for estimating the cost – as well as for tracking the funding and completion – of needed repairs. Records should remain in the database indefinitely. This database should be GIS-compatible, and OI stand examiners should report BMP problems using this work instruction, and refer to this database for including BMP problems on compartment maps and prescribing treatments for consideration in the compartment review process.

The Unit may employ procedures to close roads temporarily due to weather events, public safety, or seasonal use (see road closure work instruction). The Unit may also employ procedures to close roads permanently (see road closure work instruction).

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
DNR Staff finding BMP problem	Record problem on non-conformance report
Staff taking report from public or other staff	Record problem on non-conformance report
Unit Manager / FMFM	Ensure that reporting occurs and maintenance of tracking database

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
BMP training	identification of BMP problems & their remedies; include BMP recording training	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
BMP recording	For all staff that may be receiving a telephone report	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- Federal: Section 319 of the Clean Water Act, Coastal Zone Management Act of 1972 as amended in 1996.
- State: Natural Resources and Environmental Protection Act of 1994; part 91, Soil Erosion and Sedimentation Control; and part 301, Inland Lake and Streams.
- DNR Policy: Sale and Removals of Timber, policy and procedure No. 251 as approved March 1, 2000.
- DNR Operational Guidelines: DNR/DEQ Water Quality Management Practices on Forest Land/Forestry Best Management Practices Manual.
- DNR Riparian Management Zone guidelines.
- Operation Inventory Manual.

Monitoring:

- Water Quality Management Practices Non-conformance Report Form.
- BMP Tracking Data base, or Tracking Spreadsheet

Records:

- Water Quality Management Practices Non-conformance Report Form.
- BMP Tracking Spreadsheet

Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** June 20, 2005**Revision Number:** 0**Supersedes Version Dated:**

Work Instruction Title: 3.3 Best Management Practices--Road Closures**Work Area Group:** 3 - Best Management Practices

Purpose: To provide direction regarding the closure of Department roads.

Work Instruction:

From PA 451, Part 324.811: *“Forest Road” means a hard surface road, gravel, or dirt road, or other route capable of travel by a 2-wheel drive, 4 wheel conventional vehicle designed for highway use, except an interstate, state, or county highway. “Forest Trail” means a designated path or way capable of travel only by a vehicle less than 50 inches in width.*

Emergency Road Closures:

An emergency road closure may be invoked when there is a public safety and/or a significant environmental concern. A significant environmental concern includes, but is not limited to: deep rutting or the potential for deep rutting, sediment flow into a stream, flooding, failure of a bridge, culvert failure that results in significant stream sedimentation, threats to threatened or endangered species, and threats to special cultural or historic sites.

The Director of the Department of Natural Resources will issue a standing Director’s Land Use Order for Emergency Road Closure that can be implemented as needed and per the following procedure:

- 1) A DNR employee who identifies an existing road or trail meeting at least one of the above criteria for emergency road closure should immediately inform their supervisor and inform the FMFM Unit Manager.
- 2) The FMFM Unit Manager will evaluate the reported road condition, and if there is a public safety or significant environmental concern will immediately close the road. Posting is required, and in addition closure may be achieved by placing barricades, berms, gating, signing, etc.
- 3) The FMFM Unit Manager will immediately contact their District Supervisor who will contact the respective Ecoteam Chairperson and report the situation. The FMFM Unit Manager will complete the Road Assessment Checklist and Forest Road Treatment Proposal and follow through with approvals.
- 4) The Ecoteam will meet as soon as possible regarding the emergency road closure, and will determine whether to continue with a temporary emergency closure, or to proceed with permanent road closure. The FMFM Unit Manager will receive written notification of the Ecoteam’s decision through the District Forest Supervisor.
- 5) The road shall remain closed until the emergency situation is corrected, or closure is confirmed through the non-emergency road closure process.
- 6) If it is determined that the emergency road closure is not appropriate, the FMFM Unit Manager will lift the emergency closure and identify an alternative method to address the problem.

Non-Emergency “normal” road closures:

Any DNR employee identifying an existing road or trail which they believe should be temporarily, seasonally, or permanently closed should submit a proposal to their supervisor. The supervisor, after determining that a state forest road should be closed temporarily, seasonally, or permanently, will proceed with the following:

1. Complete the Forest Road Checklist and Forest Road Proposal. Roads maybe grouped by compartment or geography to streamline the process to evaluate more than one road at a time.
2. Seek review and approval of Forest Road Proposal from the local FMFM Unit Manager, Wildlife Habitat Biologist, Fisheries Biologist and LED Supervisor as appropriate. (Refer to Road Assessment Checklist and Forest Road Treatment Proposal).
3. Seek review and approval through the Compartment Review Process. If due to time constraints, the proposal cannot utilize the compartment review process, the request for closure will be sent to the Ecoteam, and supervisors in the chain of command will be advised.
4. If the Ecoteam reviews and approves closure, the land manager will request a Director’s Order for road closure through the normal Land Use Order’s of the Director process.
5. If the Ecoteam denies closure, the written decision is returned to the land manager.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
DNR staff desiring road closure	Collect information and prepare road assessment checklist and forest road treatment proposal. Report BMP non-conformances on appropriate forms and inform supervisor of road closure recommendation.
Ecoteams	Review proposal and forward road closure recommendations.
Statewide Council	Address disputes not resolved by Ecoteams
FMFM Division Office	Prompt processing of road closure proposals
Unit Manager/ FMFM	Evaluate roads for closure, make emergency closures, notify Ecoteams and Forest Supervisors of road closure recommendations, request Director’s Order for road closure.
Suprevisors/DNR	Complete Forest Road Closure Proposal and checklist. Spearhead local review of Forest Road Proposal.
DNR Director	Issue a standing Director’s Land Use Order for Emergency Road Closure that can be implemented as needed. Provide public review and issue order for normal road closures

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Non-emergency road closures	Understanding of roles at various levels to improve flow of information and decision making efficeny for closing existing Department roads	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Emergency road closures	Understanding of roles at various levels to expedite closure of Department roads in the event of severe weather, public safety issues, or Best Management Practices problems.	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

References:

- (Director's Order Procedure),
- Federal Law section 319 of the Clean Water Act of 1972 as amended 1987, state law part 31, part 91, of PA 451.
- Public Act 451 of 1994, Part 811 324.81101e and Part 811 324.81101f.

Monitoring:

- BMP non-compliance forms.
- Operations Inventory inspection every entry period. LED tracking using GPS in vehicles (proposed).
- Forest Road closure proposals

Records:

- Monitoring sheet for BMP non-compliance.
 - Ecoteam road closure recommendation.
 - Forest road closure proposals (new).
 - Road assessment checklists (new).
-

Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005

Work Instruction Title: 5.1 Coordinated Natural Resource Management Research**Work Area Group:** 5 - Research

Purpose:

Coordinate the conduct and management of natural resource management research for DNR

Work Instruction:

The research coordinators from each Division or Bureau must compile a summary of research activities and expenditures prior to an annual meeting with other research program leads. Initial meeting will be organized by the Wildlife Division Research Coordinator. The summary will include in-house, collaborative and contracted research. At a minimum, the summary will consider research within forested landscapes related to:

- ecological health, productivity, processes, and dynamics;
- human uses, values, preferences, and dynamics;
- new markets for forest products;
- socioeconomic trends;
- chemical efficiency, chemical use rate, and integrated pest management;
- characteristics and dynamics of water budgets, hydrologic routing, sediment dynamics, and water quality;
- ecological dynamics at the riparian, land-water interface;
- effectiveness of wildlife management at multiple scales; landscape, forest stand, etc.;
- effectiveness of fisheries management at multiple scales; watershed, segment, lake, etc.;
- conservation of biological diversity (at multiple scales); and
- effectiveness of Best (land) Management Practices for preservation, rehabilitation, and enhancement of ecosystem functions and components;
- interactions among forest, wildlife, and fisheries management programs.

The summary will describe development and implementation of research projects and incorporation of findings into DNR activities and programs.

The Coordinators will meet on an annual basis to jointly review the summaries and discuss DNR research needs, opportunities, and implementation.

An annual research summary report will be published by December 15, 2005, and thereafter in conjunction with the annual management review. The summary report must be made available to all DNR staff.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role:

Job Title/Division	Role
Research Coordinator/Wildlife	Conduct annual review of division research needs and activities
Research Coordinator/FMFM	Conduct annual review of division research needs and activities
Research Coordinator/Fisheries	Conduct annual review of division research needs and activities
Research Coordinator/Parks	Conduct annual review of division research needs and activities

Note: FMFM Research Coordinator is delegated by the Forest Resources Section Leader as either the Forest Health, Inventory and Monitoring Unit Leader or the Planning & Operations Unit Leader.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Maintenance of proficiency	Familiarity with sciences supporting natural resource management (physical sciences, forestry, wildlife and fisheries sciences, human dimensions)	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Participation in budgeting process	Familiarity with DNR budgeting process	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
Compilation and summary of Division research efforts and participation in annual summary of DNR research	Familiarity with all DNR research efforts: in-house, university, collaborative efforts with other agencies/entities	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- NRC Policy 2002 – Environmental Protection and Economic Development (3-11-1993)
 - Wildlife Division, Research Project Proposal and Review Process.
 - Michigan Statewide Wildlife Research Program, Application for Federal Assistance, W-147-R, Amendment 3, October 1 2004.
 - Wildlife Division, Federal Aid to Wildlife Restoration Study Performance Reports and Final Reports
 - Fisheries Division, Draft Policy and Procedure for Research Project Proposal and Review Process.
 - Fisheries Division, Early Drafts Research Agenda for each major theme area (e.g., Inland Lakes Theme, Rivers and Streams theme).
 - Fisheries Division, Research Section Calendar.
 - Fisheries Division, Federal Aid to Sportfish Restoration Research Grants; Five-year Project Proposals; and Annual Research Study Proposals and Revisions, and Study Final and Performance Reports.
 - Fisheries Division, Policy and Procedure for Publication of Technical Documents.
 - SFI-4.2.2.Indicator Assessment Form (for FMFM)
-

Monitoring:

- A review of the research coordination process will occur as part of the annual management review process.
-

Records:

- Annual report of DNR research activities.
-

Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005

Work Instruction Title: 6.1 Implementing Public Information and Educational Opportunities on State Forests**Work Area Group:** 6 - Recreation and Education

Purpose: To define public educational opportunities associated with State Forest Management.

Work Instruction:

1. DNR personnel will respond to requests for technical information on State Forest management in a timely fashion.
2. Freedom of Information Act Requests will follow DNR Administrative Procedures Series 19.
3. DNR personnel will involve the Office of Communications regarding issues of high public interest.
4. DNR will ensure public information and educational opportunities take place through participatory processes in State Forest management by conducting :
 - Natural Resource Commission meeting
 - Forest Management Advisory Committee meetings
 - Open Houses
 - Compartment Reviews
 - Public information meetings on special projects and initiatives.
 - Holding public hearings as required.
 - Meeting with citizen advisory committees as appropriate.
 - Establishing public input websites as needed.
5. Per NRC Policy 1005, attention to citizen questions, inquiries, complaints, and requests shall be considered a principal duty by employees at all levels. DNR personnel shall promptly follow up on concerns and complaints from the public regarding forest management by:
 - directly resolving the complaint if possible,
 - directing to appropriate specialists or managerial levels if necessary, and
 - following the compartment review decision appeals process.
6. DNR staff will periodically conduct and evaluate surveys of public values relating to State Forest management.
7. The Department of Natural Resources maintains and where appropriate establishes partnerships with external public and private management groups via memoranda of understanding, cooperative agreements or other written instruments. Examples include:
 - USDA Forest Service

- Adopt-A-Forest
- Project Learning Tree
- Michigan Arbor Day Alliance

8. The Department of Natural Resources conducts public educational outreach through a variety of methods including:
- printed materials
 - posters
 - workshops
 - formal programs
 - web sites
 - information booths/displays
 - Michigan Environthon
 - Arbor Day Celebrations
 - Kirtland’s Warbles Festival
 - other events
 - interpretive signing
9. The DNR will support private land programs promoting forest stewardship practices and initiatives such as: the Cooperative Forest Management (CFM) program, Land Owner Incentive Program, Forest Stewardship Program, Urban and Community Forest Program, Tree Farm Program, and forest certification programs including Sustainable Forestry Initiative and Forest Stewardship Council.
10. The Office of Communications Chief conducts regular meetings, on at least a monthly basis, that includes the DNR Press Secretary and Division Communication Network Representatives, to discuss educational outreach, external communications, program accomplishments, and overall program direction and priority.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: Office of Communications

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Communications Representative/OC	Manage significant information requests and educational programs.
Division Communications Network Representatives/DNR Divisions	Manage significant information requests.
Freedom of Information Act Request Coordinator/DNR	Manage Freedom of Information Act Requests
All Staff/DNR	Respond to information requests in a timely manner.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
	Public speaking/presentation skills	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Communications technology	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
	Meeting facilitation skills	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- NRC Policy 1005 – Public Involvement in Activities of Department
- Social Impact Considerations and Public Involvement Processes Work Instruction
- DNR Administrative Procedures Series 19, Freedom of Information Act (FOIA)
- OI Manual, esp. Chapter VII, “Compartment Review”

Monitoring:

- Open House/Compartment Review process.
- Department website tracking.
- Monthly reporting of Parks Visitor Center activity
- Gathering of public feedback at informational meetings.
- Tracking media coverage of DNR activities or issues.

Records:

- Open House and Compartment Review sign-in sheets.
 - Website tracking information
 - Database of “log of complaint” letters.
 - Sign-in sheets for educational outreach programs as needed.
 - Inventory of educational materials.
 - Program schedules and group contact information for Parks Visitor Centers.
 - Cooperative Forest Management monthly activity reports.
 - Cost-sharing activities with private forest owners who manage lands cooperatively with the Department (forms IC-4423-2, PR-4420’s, PR-4421, and PR-4422’s)
-

Forest Certification Work Instruction**Date of Draft Document:****Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005

Work Instruction Title: 6.2 Integrating Public Recreational Opportunities with management on State Forest Lands**Work Area Group:** 6 – Education and Recreation

Purpose: To develop, operate, maintain and promote an integrated recreation system that operates within the auspices of the state forest management planning program.

Work Instruction:

- 1) DNR is committed to comply with all applicable Federal, State, and local laws and regulations.
- 2) Recreational opportunities on State Forest lands are integrated with forest management programs. Ongoing communications with Forest Unit Managers and District Supervisors also assure recreational facility development, enhancements, or reductions are integrated and made compatible with forest operations. Public and Tribal participation regarding recreational facilities is encouraged during the Compartment Review process and other meetings held in the State.
- 3) DNR works with public interests, local units of government, user groups and DNR resource and administrative divisions to identify recreational needs and impacts.
 - a) DNR complies with statutory provisions for providing and planning development and maintenance of recreational facilities within the state and on State Forest lands and they are carried out through specific planning documents that guide the statewide recreation and trails programs.
 - b) DNR works with sponsors and local units of government to administer grant funds for trails. These funds are dispersed through a process of grant project application and review. Applications review is conducted by department staff, based on criteria guidance provided by public advisory groups to the programs.
 - c) Some of the public advisory boards that the DNR works with are: Off-Road Vehicle Advisory Board, Snowmobile Advisory Committee, and the Recreational Trails Program Advisory Board.
 - d) DNR resource divisions conduct reviews for resource impacts related to any proposed recreational project on state forest lands.
- 4) DNR manages recreational uses to accommodate various demands.
 - a) Recreational activities on state forest lands include but are not limited to:
(See chart on next page)

Recreational Activity	Management Responsibility
Hunting	DNR Wildlife Division (WD)
Trapping	WD
Fishing	DNR Fisheries Division (FSDH)
Camping/Designated Campground/Dispersed/Group	Forest, Minerals, and Fire Management Division (FMFMD)
ORV trails	FMFMD
Snowmobile trails	FMFMD
Pathways (cross-country skiing, hiking; back packing, biking, and mountain biking)	FMFMD
Boating access sites, Kayak/canoe tours	Parks & Recreation Bureau
Equestrian trail riding	FMFMD
Field Trials with dogs, dog training, and dog tracking	FMFMD & WLD
Wildlife viewing, birding tours	WLD
Scenic tours (e.g., water falls, scenic sites, spring wildflowers, fall color tours)	FMFMD
Geological tours	FMFMD
Wild fruit, nut, mushroom gathering	FMFMD
Medicinal plant gathering	FMFMD
Aesthetics and spirituality – passive recreation, unique recreational opportunities – i.e. Wilderness, Wild and Natural Areas	FMFMD, WLD
Extreme sports/endurance sports	FMFMD
Commercial operations and events	FMFMD

- 5) Resource Impacts as a result of recreational use are reported, monitored, and addressed.
 - a) Impacts on campgrounds and trails are reported, monitored and addressed.
 - b) Impacts on lands adversely affected are reported, monitored, and addressed. (e.g. excessive ORV damage. Refer to monitoring section for other key examples)
- 6) DNR evaluates recreational facilities and ensures that changes are made when needed.
 - a) Open/closure of campgrounds/facilities and/or public land areas is recommended when determined by the monitoring process
 - b) Additional facilities are recommended when determined necessary by the monitoring process.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: Office of Communications
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Recreation Specialist/FMFM	Coordinate the planning, review by all divisions, development and monitoring of public recreation facilities and opportunities
Forester, Forest Technician, Fire Officer/FMFM	Plan, develop & maintain public recreation facilities and opportunities
Manager/Supervisor, Field Stations/PRD	Plan, develop and maintain boating access sites and facilities
Park Interpreter/OC	Implement public outreach activities associated with major recreational opportunities on State Forest
Information & Education Coordinator/WD	Produce Hunting & Trapping Guides
Fisheries Biologist/FD	Produce Fishing Guides
Recreation & Trails Section Manager/FMFM	Approve the planning and development of public recreation facilities and opportunities
Land Use Program Leader/FMFM	Provide direction to staff and organizations that want to conduct recreational events on State Forest
Interpretive Manager/OC	Manage Michigan and Fishing Heritage Center
ORV Specialist/Trails Analyst FMFM	Ensure that on the ground work by trail sponsors meets Department standards and specifications
Fire Supervisor/FMFM	Plan, develop & supervise the maintenance of recreation facilities and opportunities
Unit Manager/FMFM	Oversee all planning and operation of public recreation opportunities at the management unit level.
Conservation Officer/LED	Enforce state fish and game laws as provided in annual hunting and fishing guides, ORV, snowmobile and marine guides. Administers Safety Training programs.
ADA Liaisons/ DNR	Enforce and review ADA law and requirements

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
	Public Speaking	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	American's with Disabilities Act	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Hazard Tree Identification	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Exotic Plant Identification	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Snowmobile/ATV Operator's Training	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Chain saw safety	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Heavy Equipment Training	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Snowmobile Grants Training	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Communications software (Power Point, Word, Excel)	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Arc View	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	BMP Training	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Commercial Driver's License	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Soil Erosion/Sediment Control Certification	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
	Lift-truck Certification	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- Off-Road Vehicle (ORV) Trail and Route Maintenance Handbook (IC-1991);
- Annual guides for hunting & trapping, fishing, camping, snowmobiling, ORV's, and marine;
- Public Act 451 of 1994;

- American with Disabilities Act (ADA), P.L. 101-336.
 - Planning Documents:
 - Statewide Trails Initiative – March 1992 – *Provides for statewide trails overview.*
 - Forest Recreation Plan – June 1995 – *Provides for non-motorized forest recreation*
 - ORV Plan – 1979-. *2005 plan update and trail inventory underway.*
 - Snowmobile Plan – *Annual updates VIA grant sponsor application; proposal for statewide program plan under review for 2005 implementation.*
 - Assessment of Recreation and Trails – July 1999 – *Provides program overview and projected needs to support public recreation demands.*
-

Monitoring: Occurs at three levels

1. Forest Management Unit Level:

- Active management practices (i.e., prescriptions) conducted by WD/FD/FMFM are monitored subsequent to implementation via the Forest Treatment Proposal process. WD and FD also conduct game and non-game population surveys for management purposes such as harvest regulation and inventory.
- T&E species reviews
- Monitoring quality of Operations & Inventory data.
- Inspections of Land Use Permits.
- ORV trail sponsors must monitor impacts and management actions.
- Snowmobile trail sponsors must monitor impacts and management actions.
- Campground inspections.
- Inspections of boating access sites and associated facilities.
- Road inspections
- Compartment Review/Open House process.
- Trail inspection reports
- BMP non-compliance reporting

2. District / Eco-regional Level:

- public values expressed as a set of indicators to gauge management actions; also
- issues specific to landscape scales are addressed at this level (e.g., road closures).
- Enforcement of state laws and Department administrative rules through hunting & trapping, fishing, individual species, ORV, snowmobile, and marine guides.

3. State Level: databases maintained at each division central office which compile monitoring activities at the management unit level.

Records:

Hardcopy:

- Forest Treatment Proposals (R-4048) and completion reports (R-4048-1E).
 - ORV trail monitoring (PR-1990-2 and PR-1990-3) and maintenance (PR-1990-1).
 - Snowmobile trail monitoring and maintenance; no standard form, with the exception of weekly grooming reports (PR-1855).
 - Land Use Permits (PR-1138).
 - State Forest campground inspections (R-4117).
 - Boating access/facilities inspections; Grant-in Aid/PRD (R-3024-A, R-3024-B, R-3024-C, R-3024-D).
 - Road projects/bridges (project reporting form; PR-4288). There is no form for road inspections.
 - Hazard tree inspections (form in draft).
 - ORV/snowmobile trail proposal form (R-1862-E).
 - Land acquisition (R-4077-E).
 - Annual species harvest reports
 - Wildlife survey reports
 - BMP non-compliance reports
-

Forest Certification Work Instruction

Date of Draft Document:

Effective Date: June 20, 2005

Revision Number: 0

Supersedes Version Dated:

Work Instruction Title: 6.3 SFI Involvement and the Michigan State Implementation Committee

Work Area Group: 6 - Recreation and Education

Purpose: To define the Department’s involvement with the SFI State Implementation Committee (SIC)

Work Instruction:

1. The FMFM Chief will appoint a representative to serve on the SFI State Implementation Committee; additional staff will attend SIC meetings as appropriate. Attend semi-annual meetings of the Michigan State Implementation Committee and staff participation in subcommittees including:
 - Loggers training subcommittee
 - Inconsistent practices subcommittee
 - Communications (public outreach) subcommittee
 - Annual Report Subcommittee
2. Utilize the SFI inconsistent practices reporting system (800 number) to address concerns raised by public and external stakeholder groups. Identify a communications process specific to handling inquiries and complaints.
3. Report annually to the SFI Program on compliance with standards. Maintain appropriate level of record keeping and documentation as required by Michigan State Implementation Committee.
4. The SIC FMFM representative will be responsible to communicate decisions and policy changes from the SIC to the rest of the department.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: Office of Communications
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Division Chief / FMFM	Assign Department representative to SIC
Department SIC representative / F M F M	Participate on the SIC
Others as assigned	Participate on SIC subcommittees
Forest Certification Specialist/ FMFM	Prepare annual reports, participate on SIC committees

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
	Familiarity with SFI standards and SIC procedures	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
		<input type="checkbox"/> E <input type="checkbox"/> N

References:

2005-2009 SFI Standard
Management Review Process Work Instruction

Monitoring:

SFI annual compliance report
DNR representative communications on SIC

Records:

SIC meeting minutes
SFI annual compliance report

Forest Certification Work Instruction
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Date of Draft Document:

Effective Date: August 16, 2005

Revision Number: 1

Supersedes Version Dated: June 20, 2005

Work Instruction Title: 7.1 Timber Sale Preparation and Administration Procedures

Work Area Group: 7 - Integrated Implementation and Contracting

Purpose: To provide direction to field staff on preparing timber for sale and on administration of timber sale contracts.

Work Instruction:

I. Pre-sale Checklist.

Complete the Pre-sale Checklist which will indicate the sale conditions to include in the Timber Sale contract.

II. Timber Sale Contract Inspection Process

Use the following guidelines to record timber sale inspections including the initial on-site meeting, ongoing site inspections and to complete the final Timber Sale Contract – Field Inspection Report.

1. Conduct a pre-sale meeting with the stumpage purchaser and/or logging crew.
 - a) Review the provisions of the contract and discuss any special features that require care or attention.
 - b) At the pre-sale meeting record the following in the Remarks section of the initial Timber Sale Contract - Field Inspection Report (R-4050):
 - i) Harvesting crew name
 - ii) Name of SFE trained foreman
 - iii) Sustainable Forest Education (SFE) training completion dates for SFE trained foreman
 - (1) Date of completion of core training
 - (2) Annual refresher training up to date for the previous year?
2. During each inspection visit, record observations and non-compliances using form R-4050. If conditions observed on the sale are not in compliance with the contract or if any unacceptable conditions are observed, note these and discuss them with the purchaser.
3. At a minimum fill out a Timber Sale Contract - Field Inspection Report (R-4050) when each payment unit is complete based on the accumulated notes recorded during previous inspections. A final Inspection report will be completed when the sale is completed or closed and attached to the Timber Sale Completion Report.
4. Additional instructions for evaluating some of the items on the Timber Sale Contract - Field Inspection Report follow:
 - a) **BMP's.** The following items on the Timber Sale Inspection Form (R-4050) relate to BMP's. Follow the guidelines in the BMP manual (MDNR, 1994) when evaluating these features as follows:
 - i) Landings. Be sure they are located away from streams and other water bodies. Fueling, maintenance and repair should only be conducted on properly located landings except in emergencies.

- ii) Cleanup of Area. Check to be sure that any spills have been cleaned up according to the requirements of the General Sale Condition 5.6.1. Additionally the site should be kept clean of trash generated by the harvest operations.
- iii) Soil Protection. Check to be sure that operations affecting soil erosion, compaction and rutting are in compliance with contract specifications.
- iv) Road construction, Road Maintenance, Location of Skid Trails and Roads. These three items on the form should be used to check that road construction, road maintenance and the location of roads and skid trails, including road closures, are in compliance with contract specs and the BMP manual. Careful attention should be given to these features to assure that they are not causing negative site impacts such as rutting, erosion or runoff into streams, lakes and ponds.
- v) BMP Applications. This is a general BMP category to consider anything related to BMP's that has not specifically been addressed in the previous items. Restricting operations in RMZ's, and avoiding vernal pools are some examples of issues that should be checked here.

b) **Safety.** DNR encourages safe working conditions and safety training for contractors and stumpage purchasers within the scope of our legal responsibility and authority. The following personal protective equipment (PPE) checklist, and the Training Requirements for Loggers (section c), apply to timber sale contracts only. Recommendations for small receipt permits for timber removal and firewood permits are covered under information circulars.

- i) Logger safety. Stumpage purchasers are required by contract to abide by all safety laws including MIOSHA safety standards. The following PPE table, consistent with MIOSHA standards, will be monitored on all open timber sale contracts. The table, in conjunction with the explanations that follow, are to be used to assess worker safety on each timber sale.

Personal Protective Equipment Checklist							
Activity	Leg Protection	Hard Hat	Safety Boots/Shoes	Eye Protection	Face Screen	Hearing Protection	Gloves
Chainsaw operator	X	X	X		X*	X	
Logging or road construction equipment operator		X	X	X		X	
Truck driver**		X	X	X		X	
Landing worker (repair person, deck attendant)	If using chainsaw	X	X	X		X	As needed
Supervisor		X	X	X		As needed	
DNR staff	If using chainsaw	X	X	X		As needed	As needed

* When the Face Screen is used, no other eye protection is required.

** When outside the truck on the logging job.

- (1) **HARD HAT.** Approved hard hats shall be worn by all persons present on the logging operation including log truck drivers and anyone on or near the woods or landing areas. Hard hats are not required while operators are within an enclosed cab that meets MIOSHA standards for rollover protections and brush guards.
- (2) **EYE PROTECTION**
 - Safety glasses, face shields, or goggles shall be worn by all workers involved in activities where wood chips, sawdust, flying particles, foreign objects (twigs, limbs, branches) may injure, puncture, scratch, or damage workers' eyes.
 - Eye protection for equipment operators where cab protection or a windshield is not adequate.
- (3) **HEARING PROTECTION.** Hearing protection shall be worn by all workers operating chainsaws or woods equipment. All workers in the immediate area of any mechanized equipment shall use hearing protection.

- (4) **SAFETY FOOTWEAR.** Workers shall wear foot protection, such as* heavy-duty logging boots, which are waterproof or water-repellent and which cover and provide support to the ankle. Workers shall wear protective footwear when working in areas where an employee's feet are exposed to a danger of foot injuries due to falling or rolling objects or a danger of objects piercing the sole of the shoe. Workers who operate a chain saw must wear foot protection that is constructed with cut-resistant material that will protect the employee's foot against contact with a running chain saw.

*The "such as" means including but not limited to.

- (5) **CHAINSAW SAFETY EQUIPMENT.** Workers who use chainsaws must wear leg protection made of cut-resistant material, such as ballistic nylon.

- (6) **HAND PROTECTION.** An employee on a logging operation who is working with a wire rope or sharp object that may cause an injury to the hand shall wear gloves of a suitable type. The gloves shall provide adequate protection from puncture wounds, cuts, and laceration.

- ii) **Administration of safety.** Personal protective equipment must be properly used by all personnel, including DNR staff on State timber sales with open contracts. If improper use of PPE by one or more contract employees is observed, the following steps will be taken. Multiple observations of improper PPE use on one inspection visit will be counted as one violation.
- (1) If unsafe practices are observed and not immediately remedied, all operations on the contract are to be suspended until the unsafe practice is resolved. The unsafe practice must be noted on a Timber Sale Inspection form (R-4050). The forest management unit tracks violations on each contract.
- (2) If unsafe practices are observed during 7 separate field visits on a single contract, the contract will be terminated. Contact the Timber Sales Specialist regarding the process to terminate a contract. The Timber Sales Specialist will also track contract terminations.
- (3) If 4 or more contracts under the same purchaser are terminated for unsafe practices within a 12 month period, the purchaser will be placed on the no-bid list for one year.
- iii) **Referrals to MISOHA.** MIOSHA is interested in receiving referrals when a contractor with one or more employees has health or safety hazards that are violations of MIOSHA rules and the contractor will not voluntarily address the issue(s). When a hazard is identified and corrected, there is no need to refer to MIOSHA. MIOSHA is also interested in receiving referrals when a serious accident, such as an amputation or severe laceration occurs. The Timber Sale Specialist will submit all referrals.

c) Training requirements for loggers. Stumpage purchasers, their employees, their contractors, and their subcontractors shall have adequate training, sufficient for their roles and responsibilities. Purchasers are required to verify that a foreman who has a current certificate of completion of Michigan Sustainable Forestry Education (SFE) or Wisconsin Forest Industry Safety and Training Alliance (FISTA) training will be on site while logging operations are active on State timber sales. Current certification for Michigan trained loggers means that in the previous calendar year the core course requirements were met and the continuing education requirement was met. Current certification for Wisconsin trained loggers means that they must have a current certificate of completion of training issued by FISTA. The foreman must be on-site at all times or designate another person who has met the same training requirements as his or her alternate when absent. Current status of training will be verified at the pre-sale meeting with the sale administrator, documented on the Timber Sale Inspection form, and checked periodically utilizing the sources listed below (see also Monitoring section of this work instruction).

Logger Training Requirements			
SFI Training Standard	Core courses	Continuing education	Contacts
Michigan - Certificate of Completion for SFE training	Completion of SFE core courses	Completion of 8 hours of continuing education courses each year.	<ul style="list-style-type: none"> UP SFE core training database: http://web1.msue.msu.edu/dickinson/SFE.xls UP SFE continuing Education database, 2004: http://web1.msue.msu.edu/dickinson/Individuals-ContinuingEducation.xls UP SFE continuing Education database, 2005: web1.msue.msu.edu/crawford/sfehous.htm For LP SFE training records contact, Julie Harwood, 866-339-1587.
Wisconsin - Certificate of Completion for Qualified Logging or Resource Professional training	Completion of one professional training course every two years, 1 st aid/CPR and BMP training one time only.	Completion of 8 hours of continuing education courses each year.	For FISTA training records contact Amy Marquardt, 800-551-2656.

d) **Aesthetic Considerations** that were noted in the Pre-sale Checklist and/or specified in the contract should be evaluated for compliance.

e) **Fire Prevention.** Operations relating to contract provisions that apply restrictions for the purpose of reducing fire risks should be evaluated.

f) **Wildlife Considerations.** Evaluate any stand level habitat (snags, coarse woody debris, mast tree, conifer retention, threatened or endangered species, or ecologically unique feature) provisions of the contract. These are also noted in the Pre-sale Checklist.

5. The Remarks section should also be used to evaluate compliance for anything else that is specified in the contract and not directly addressed in the items above. Examples would be historical or geologically unique features, tribal resources or forest health risks.

6. Copies of inspection forms for completed contracts are to be filed with the Timber Sale Contract in the Unit office.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM

DNR – Wildlife

DNR – Fish

DNR – Law

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Foresters, Forest Technicians / FMFM	Complete Pre-sale checklist and Timber Sale Inspection Form. Follow-up with purchaser to correct non-conformances.
Timber Sale Administrator	Responsible for inspection of timber sales and documentation of observations. Comply with work instruction. Follow up with purchaser to correct non-conformances as needed.
Unit Manager / FMFM	Responsible for overseeing use of forms and compliance to work instruction. Review inspection reports for accuracy and completeness. Follow up with purchaser to correct non-conformances as needed.
Wildlife Biologists and Technicians / WLD	Report non-conformances or other issues to unit manager.
Fisheries Biologists and Technicians / FSHD	Report non-conformances or other issues to unit manager.
Conservation officers / LED	Enforce state law and address violations.
Timber Sales Program Leader / FMFM	Responsible for monitoring to determine the number and frequency of safety offenses and insuring that proper administrative actions are taken.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists / New
Timber sale administration	Timber Sale Administration FMFM Training Course	<input checked="" type="checkbox"/> E <input type="checkbox"/> N
SFE training	DNR staff should complete core training for Sustainable Forestry Education (SFE) within 12 months.	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- Policy 251, March 2000, Sales and Removal of Timber
- Michigan DNR, 1994. Water Quality Management Practices on Forest Land. (BMP manual)
- MIOSHA STD-1135, Dept of Labor, General Industry Standards, Part 51. Logging, as amended 6/17/1996
- MIOSHA STD-1126, Dept of Labor, General Industry Standards, Part 33. Personal Protective Equipment, as amended 5/14/1997
- MIOSHA notification web address: http://www.michigan.gov/cis/0,1607,7-154-11407_30453-93835--,00.html
- Sustainable Forestry Education: <http://wildfire.for.msu.edu/extension/sfe.htm>

Monitoring:

- Unit managers perform QA/QC function, Inspection forms (R-4050), Timber sale completion reports
- UP SFE core training database: <http://web1.msue.msu.edu/dickinson/SFE.xls>
- UP SFE continuing Education database, 2004: <http://web1.msue.msu.edu/dickinson/Individuals-ContinuingEducation.xls>
- UP SFE continuing Education database, 2005: web1.msue.msu.edu/crawford/sfehours.htm
- LP SFE training data contact, Julie Harwood, 866-339-1587
- FISTA training records contact Amy Marquardt, 800-551-2656.

Records:

- Timber sale inspection form, timber sale contract, VMS Customers database
- Pre-sale Checklist (new),
- Timber Sale Inspection Form (R-4050)
- Timber Sale Completion Report (Division Timber Sale Computer Program)

Forest Certification Work Instruction**Date of Draft Document:****Effective Date:** August 5, 2005**Revision Number:** 1**Supersedes Version Dated:** June 20, 2005**Work Instruction Title:** 7.2 Legal Compliance and Administration of Contracts**Work Area Group:** 7 - Integrated Implementation and Contracting

Purpose: To articulate DNR's performance standards for administering service contractors on State Forest land or facilities. Timber sale contracts are also covered in the Timber sale checklist and sale administration procedures work instruction.

Work Instruction:**Legal requirements:**

- 1) Statement of commitment. MDNR will comply with all applicable Federal, State, and local laws and regulations including those that govern employment practice and worker safety.
 - a) Policy and procedures reflect Federal and State legal requirements available at http://www.michigan.gov/dmb/1,1607,7-150-9131_9347-29674--,00.html#2400. Further direction is provided via these work instructions.
- 2) Legal and other Requirements shall be reviewed through the annual Management Review process.
- 3) Protection from illegal activities.
 - a) Illegal activities are to be reported by employees who observe them to the local unit manager at the earliest possible opportunity. Illegal activities include but are not limited to the following: illegal ORV use, unauthorized cutting of trees or firewood, unauthorized land use, encroachment or trespass, or unauthorized burning.
 - b) Forest ownership boundaries are to be clearly established before any timber harvesting or other management activity is conducted adjacent to neighboring owners.

In addition to these legal requirements the following measures are taken to help meet our obligations to personal and environmental safety.

Contract fairness:

- 1) Equal access, equal opportunity, fair labor laws
 - a) Michigan's Equal Employment Opportunity Plan provides fair employment and training opportunities to DNR employees
 - b) DNR Administrative Procedure 13.01-01 - DNR Procurement Quick Reference Guide and DNR Administrative Procedure [13.01-02 - Acquisition of Commodities and Services Implementing Executive Directives 2004-8, 2004-9](#) assures that all vendors have equal opportunities to bid on providing commodities and services to the State.
 - c) State and department purchasing policies require service and commodity contractors to comply with all applicable state and federal labor laws.
 - d) Timber sales, timber sale prep and other contract opportunities are offered on an open, competitive bid process, in a variety of sizes and across the geographic extent of the State Forest system to provide broad access to state contracts.
- 2) Insurance requirements
 - a) Timber Sale policy requires that stumpage purchasers complete DNR, FMFM Form PR 4031-5 Timber Sale Verification of Worker's Disability Compensation Act Compliance within 21 days of stumpage purchase award. On this form, stumpage purchasers certify that: 1) they are not subject to the Worker's Compensation Laws, or 2)

they are excluded from Worker's Compensation Laws and provide a Notice of Exclusion, or 3) they have a Worker's Compensation Policy and provide an original Certificate of Insurance.

- b) State and Department policies specify insurance requirements for contracts. State policies are found [at http://www.michigan.gov/dmb/1,1607,7-150-9131_9347---,00.html](http://www.michigan.gov/dmb/1,1607,7-150-9131_9347---,00.html). Department policies are found at <http://dnrintranet/pdfs/divisions/fosb/asdproc/series13.htm>. These policies require that service and commodity contractors carry liability insurance. Proof of liability insurance must be verified before contracts are executed.
- 3) Dispute resolution
 - a) Disputes between contractors and the State of Michigan are handled following the procedures detailed in the Department of Management and Budget website called "Doing Business with the State of Michigan" http://www.michigan.gov/doingbusiness/0,1607,7-146-6592_8522---,00.html.
 - b) Disputes between employees and their managers are resolved following existing union contracts and department policies. Disputes between the employees of contractors and their managers are resolved following the applicable policies of the contractors.

Chain of custody. Stumpage purchasers shall be notified that under FSC's Chain of Custody standards they may be required to show evidence that their wood comes from a certified source. This notice will be included in timber sale contracts.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: State Forest facilities
 DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Forester & Forest Technicians/FMFM	Propose and administer Department contracts.
Unit Managers/FMFM	Approve contract proposals. Process notices of illegal activities. Supervise administration of contracts and implementation of this work instruction.
FMFM Division office	Approve contract proposals. Maintain contract documents.
Contract administrators	Administer insurance, safety and BMP training requirements of contracts.
Recreation Section leader/FMFM	Provide BMP requirements and training to grant sponsors.
Conservation officers/LED	Enforce state law and address violations.
Other DNR staff	Provide FMFM Unit Manager with information on issues relating to this work instruction, e.g. legal compliance, contract fairness and contract administration.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
BMP training	BMP training for contract administrators	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- DNR Administrative Procedure 13.01-01 - DNR Procurement Quick Reference Guide and DNR Administrative Procedure [13.01-02 - Acquisition of Commodities and Services Implementing Executive Directives 2004-8, 2004-9](#)
- Insurance requirements, http://www.michigan.gov/doingbusiness/1,1607,7-146-6592_13075---,00.html
- Information circulars for firewood permits, FMFM Word template IC-4166
- DNR policy 19.05 dated 9-13-2004, Safety Program – Personal Protective Equipment Policy

Monitoring:

- Trail inspection reports.
 - DNR vendor database
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Records:

- Insurance certificates on.
- DNR vendor database
- Chain of custody notices.
- Contracts
- Michigan Accounting Information Network

Forest Certification Work Instruction
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Date of Draft Document:

Effective Date: August 5, 2005

Revision Number: 1

Supersedes Version Dated: June 20, 2005

Work Instruction Title: 8.1 Michigan Department of Natural Resources Staff Training for State Forest Management

Work Area Group: 8 - Training

Purpose:

- (1) Provide training to empower employees to perform their jobs to the level required by DNR policies, procedures and work instructions.
 - (2) Record all training in a database, and make records available upon request from the employee or their supervisor.
 - (3) Utilize the training database to routinely monitor that training is up-to-date.
 - (4) Communicate regularly with DNR employees to ensure understanding of this work instruction.
-

Work Instruction:

1) Job training needs will be determined.

- a) Training Officer annually summarizes training needs.
 - i) Training Officer maintains a table of core training needs by program area according to the policy, procedures, and work instructions of each division.
 - ii) Training Officer shall annually assess gaps in training and compile a prioritized list by program area.
- b) Training Officer shall annually inform Supervisors of the training recommendations by position using the annual training recommendation list. Supervisors will determine job training needs in conjunction with employees.
 - i) As part of the annual Performance Appraisal process, Supervisors must conduct a training assessment, update the Individual Training Plan (R7016e), and complete the Proposed Annual Training form (R7015e) as per October 27, 2004 DNR Personnel Manual Chapter 10.04 and divisions' policies,
 - ii) Supervisors send the Training Officer the annual list of Training Needs for employees.

2) Training implementation

- a) Training officer schedules annual training and informs supervisors and employees of the schedule.
- b) Supervisors and employees ensure training completion.
- c) Supervisors and employees shall inform Training Officer of completion of all required training, and of any additional training completed.

3) Training records will be maintained by the Division and shall be accessible to employees.

- a) Division Training Officer will maintain adequate training records so that it is ensured that training is up to date.
- b) Training Officer will provide training records to supervisors and their employees on request.

Note: the Department is in process of developing a centralized training data base.

4) Training Needs, Priorities and Record Availability will be Communicated

- a) Annually, the Training Officer shall compile a list of completed training by employee, and will send to Supervisors.
- b) Supervisors shall identify any gaps in priority training and completed training and report to the Training Officer.

- c) All employees will receive communication regarding the availability of training records, the methodology for requesting and/or developing training, and the current priorities of the Division.
- d) As new training opportunities and requirements become known, that information will be shared statewide.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Training Officers	Determine annual training plan for Division employees and inform supervisors and employees. Schedule training courses. Distribute educational information as identified.
Supervisors	Identify employees training needs per performance appraisal system and inform Division training officer. Schedule employee training per employee annual training plan.
Division Management Teams	Identify core training required for Division positions.
Employees	Assist in identification of needed training during performance appraisal system. Attend training and notify training officer of completed training.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Forest Certification Overview Training	To clearly define the role of employees in the Certification process	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Statewide Forest Certification Work Instructions	Train staff in their roles identified in the work instructions	<input type="checkbox"/> E <input checked="" type="checkbox"/> N
Knowledge of Training within Performance Management System	Make employees aware of the training component of the Performance Appraisal Process (see reference section)	<input checked="" type="checkbox"/> E <input type="checkbox"/> N

References:

- Training forms R7015, R7016
- [DNR Personnel Policy, Personnel Manual - Chapter 10 - Performance Management - Training Assessments 10.04](#)
- FMFM Policy 142 (Personal Training and Development).
- Training/Skills described in other Work instructions
- Wildland and Prescribed Fire Qualification System Guide PMS 310-1 and the Michigan Addendum to the Wildland and Prescribed Fire Qualification System Guide

Monitoring:

- Employee and Supervisor shall assess the progress, after receiving priorities from Training Officer and Division each year.
- Training Officer shall monitor the progress towards meeting training needs and goals by the Division, and report any deficiencies.

Note: the Department is in process of developing a centralized training data base.

Records:

- Employee and Supervisor shall assess the progress, after receiving priorities from Training Officer and Division each year. All records will be maintained by the Training Officer in Lansing and shall be available upon request to a Supervisor for employees they supervise, and to individuals for their personal records.
 - Forms – Training records
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Forest Certification Work Instruction
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Date of Draft Document:**Effective Date:** June 20, 2005**Revision Number:** 0**Supersedes Version Dated:**

Work Instruction Title: 9.1 Collaboration with Tribes in Regard to Management of State Forest Land**Work Area Group:** 9 – Tribal Issues

Purpose: To define interaction and collaboration with federally recognized Michigan tribes in regard to management of State Forest Lands. Identify and protect sites of special cultural, ecological, economic, or religious significance to indigenous peoples on State Forest Lands.

Work Instruction:

1. The DNR Director will appoint a statewide coordinator for tribal issues. Division coordinators in FMFM, Wildlife, Fisheries, and Law Enforcement Divisions will be appointed by the DNR Division Chiefs to track tribal issues related to their respective Divisions and to ensure compliance with existing policy, procedures, and/or work instructions.
2. Tribal contacts and involvement in tactical forest land management activities:
 - a. MDNR will seek a description of traditional geographic areas of interest for each of the federally recognized Michigan Tribes.
 - b. The 12 federally recognized Michigan Tribes will be invited to all DNR FMU open houses, and will be notified of all Compartment Reviews. Tribes will be informed of locations of upcoming year-of-entry compartments prior to start of field inventory by DNR staff. FMFM Unit Managers will be responsible for appropriate written notifications.
 - c. The 12 federally recognized Michigan Tribes will be invited to participate in statewide and ecoregional public planning events.
 - d. Tribal Historic Preservation Officers (THPO) shall be notified of Department undertakings involving federal funds that may affect tribal archeological sites or tribal cultural property. Designated Division Coordinators are charged to ensure this occurs in their respective divisions. The list of THPOs is maintained by the National Park Service.
 - e. The State Historical Preservation Office shall be notified of all Compartment Review plans and of other Department undertakings that may affect tribal sites of historical significance. Prior to initiating active management activities, DNR management staff shall check with the Department of History, Arts and Libraries (HAL), State Historic Preservation Office (SHPO) staff to determine if locations involve sites of historical significance such as tribal religious, cultural or historical sites. HAL maintains an extensive and regularly updated inventory of such sites. Sites of known historic or archaeological significance should be treated in accordance with recommendations of the Department of State's Michigan Historical Center.
 - f. Statewide Meetings will be held with the 12 federally recognized Michigan tribes to identify and discuss issues of common interest. The statewide coordinator for tribal issues will schedule and facilitate the

meetings. At least one meeting per year shall be scheduled and will be attended by appropriate persons from all Divisions involved with state land management.

g. Stand examiners must check the DNR archeological GIS data layer.

3. Confidentiality of Tribal Information:

Sites of archeological, cultural, or other interest related to Michigan tribes shall be considered confidential and shall not be made public. Sites of archeological, historic, or traditional interests are exempted from the Freedom of Information Act. The Department will maintain confidentiality.

4. Tribal Treaties:

Tribally owned land in reservation or trust status is considered sovereign territory, and the State of Michigan does not exercise any authority or control over such land. This issue is controlled by Federal law, and Michigan DNR has no policy, procedure or order pertaining to this issue.

Scope: (All State Forest Land and Affected Divisions): State Forest Land Other: _____

DNR – FMFM DNR – Wildlife DNR – Fish DNR – Law DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Statewide Coordinator for tribal issues / DNR	Conduct annual meeting with Michigan tribes. Coordinate tribal issues among DNR Divisions. Seek a description of traditional geographic areas of interest for each of the federally recognized tribes.
Unit Manager / FMFM	Establish local communications with tribal point-of-contact. Notify SHPO of management activities that could impact sites of tribal interest. Issue local use permits.
Division Coordinator for Tribal Issues / FMFM, LED, WLD, FSHD	Track tribal issues related to their Division. Attend annual meeting with tribes. Notify THPO of Department undertakings involving federal funds that may affect tribal archeological sites or tribal cultural property.
Forest Planning and Operations Unit Manager / FMFM	Ensure tribes are notified and invited to participate in statewide and ecoregional public planning efforts.
Division Chief / FMFM, WLD, FSH, LED	Appoint Division coordinators for tribal issues
District Manager / FMFM	Ensure the tribes are notified and included in ecoregional public planning efforts.
FMFM Division Coordinator for Tribal Issues	Inform tribal representatives of open house and compartment reviews. Inform tribes of locations of upcoming year-of-entry compartments prior to start of field inventory by DNR staff.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists/ New
Tribal values	Instruction and information about tribal cultural and natural resource	<input type="checkbox"/> E <input checked="" type="checkbox"/> N

	values	
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References:

- Eight primary Indian Treaties and related court decisions,
- OI Field Manual Chapter 7, FMFM policy and procedure #251, Section j.

Monitoring:

- Internal Audit

Records:

- Treaty maps maintained by the DNR Statewide Coordinator for Tribal Issues
 - Geographical areas of interest for the tribes maintained by the FMFM Division Coordinator
 - Tribal points of contacts maintained by the DNR Statewide Coordinator for Tribal Issues
 - Land Use permit issue record maintained by Unit Managers
 - OI open house and compartment review contact records maintained by Unit Managers
 - State forest planning participation records will be maintained by District and Lansing Planning Specialists
 - Cultural heritage records maintained in locked comments in OI records
-