

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES**  
**Forest Certification Work Instruction**

DRAFT     FINAL

**Date of Draft Document:**

**Effective Date: 6-01-16**

**Revision Number: 3**

**Supersedes Version Dated: 6-23-15**

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**Work Instruction Title:** 2.3 Integrated Pest Management and Forest Health

**Work Area Group:** 2 – Forest Regeneration and Chemical Use

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

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**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 and Rural Development, other state, and federal agencies as needed.
2. Fire protection and management is accomplished under the FRD 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. Use 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 FRD 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 using 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.
  - a. "Invasive non-native plants will not be used on public lands, mandated restoration projects or recommended for use on private lands" (DNR 2001).
  - b. Consideration should be given to the potential spread or increase of invasive exotic species in the planning and operational stages of all treatments. FRD Forest health specialists will provide direction and advice to the FMUs in regard to the spread and control of invasive exotic species. Non-chemical methods will be the preferred method used to control and /or decrease invasive exotic species whenever possible. Chemical methods may be used alone or in combination with non-chemical methods as needed, (see Work Instruction 2.2 – Use of Pesticides and Other Chemicals on State Forest Lands).
  - c. In the conduct of field operations FRD staff shall follow FRD Guidelines for Decontamination Methods by Risk Level for Terrestrial Activities and Equipment.
  
6. Genetically Modified Organisms (GMOs).
  - a. Use of genetically modified organisms is not allowed on certified land in the State Forest system. Not allowing use of genetically modified organisms applies to all organisms, including trees.
  - b. Genetically improved organisms (e.g., Mendelian crossed) are not considered to be genetically modified organisms, and may be used.

**Scope:** (All State Forest Land and Affected Divisions):     State Forest Land  Other: \_\_\_\_\_  
 DNR – FRD     DNR – Wildlife     DNR – Fish     DNR – Law     DNR – Recreation

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

Job Title/Division	Role
Forester, Forest Technician / FRD	Prescribe and administer harvest treatments.
Timber management specialist / FRD	Review harvest prescriptions. Conduct regeneration treatments.
Wildlife biologist, Wildlife Technician / WD	Review forest treatments, prescribe other specific habitat manipulations, may conduct treatments.
Forest Health Specialist (Forest Health Monitoring Program Leader & Forest Health Management Program Leader/ FRD	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 / FRD	Oversee application of this work instruction at the forest management unit level
Fire officer / FRD	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. FRD 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.
- Work Instruction 2.2 – Use of Pesticides and Other Chemicals on State Forest Lands
- 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
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**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](http://www.michigan.gov/documents/2004ForestHealthHighlights3_116430_7.pdf)
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