



Pesticide Handling and Application Module

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Introduction

The tasks of handling and applying pesticides have inherent risks and responsibilities. In this module we clarify the requirements and considerations that pesticide users must adhere to legally for their safety, the safety of others, and the environment.

The situations requiring a business license and individual applicator credentials for using pesticides are discussed. Pesticide operations are reviewed from paperwork, a physical, a mechanical, and a practical standpoint. After evaluating the essential components of a sound pesticide application operation, we will step through:

- key decisions for determining the need for a pesticide application, and
- how pesticide selection choices are made with safety in mind, and
- standard pesticide handling and application precautions to protect the applicator and the environment

The three Michigan laws with significant impact on pesticide applicators are:

- The Natural Resources and Environmental Protection Act, Act 451, Part 83
- Regulation 636, as amended, Pesticide Applicators
- Regulation 637, Pesticide Use

To obtain a copy of the law(s), contact your regional Michigan Department of Agriculture (MDA) office (see Appendix for phone numbers) or visit the MDA web site at www.michigan.gov/mda

Personal Applicator Credentials

In Michigan, any person who applies pesticides as a part of their job responsibilities is required to have pesticide applicator credentials, except as indicated below. These credentials include the registered or certified applicators. Applicator credentials are not necessary when persons use general use, ready-to-use pesticides as part of a non-licensed business activity. Ready to use pesticide means that it is applied directly from its original container consistent with label directions and does not require mixing or loading prior to application (Act 451, Part 83, Section 8306.2). All persons using any type of pesticide in a licensed business operation must have an applicator credential. Below are examples of pesticide uses and applicator credentials:

Credentials Required

- Liquid herbicide applications to lawns of others, as a part of a for hire business activity.
- Applying 'weed and feed' products with a granular spreader on the hospital or school grounds as an employee of the hospital or school.
- Treating trees and shrubs that are on the property of another with pesticide, as part of a for hire business activity.

- Treating trees and shrubs that are on the golf course where the applicator is employed, using an insecticide requiring dilution.
- Treating an athletic complex for mosquitoes which required mixing of insecticide solution, whether employed by the facility to make the application or performing it as a for hire business activity.
- Making herbicide application to a public lake within a park while employed by the park administration.

No Credentials Required

- Use of a ready-to-use herbicide formulation to treat weeds in sidewalk cracks at the site (non-licensed business) where the applicator is employed.
- Placing self-contained ant baits in the building where the applicator is employed.
- Using an aerosol wasp spray to eradicate a wasp nest at the building where the applicator is employed.
- Spot treating weeds with a ready-to-use herbicide at a golf course where the applicator is employed

Personal Applicator Credentials Priority List

Please indicate if you or your employees *do not* have the appropriate credentials and list any improvements you would like to make in this area.

1. _____
2. _____
3. _____

Basic Setup and Operation Guidelines

Compliance Check

Instructions: The questions on the left describe the most common situations involving pesticide regulations in Michigan. To determine your rating in each situation, fill in the appropriate rating on the far right to determine the level of risk. Choose a 1, 2, 3, or “Not Mandatory”. A “1” rating is considered out of compliance. A “2” rating generally indicates something has to be completed to be in compliance. A “3” rating is considered within compliance and a “Not Mandatory” means that the rule does not apply to your operation.

1. Are all persons who apply pesticides as a regularly scheduled work assignment are either certified or registered applicators? (Act 451, Part 83, Section 8314 (1)(2), Reg. 636 Rule 2)

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 3 = All have applicator credentials
	<input type="checkbox"/> 2 = Some have applicator credentials
	<input type="checkbox"/> 1 = None have applicator credentials
2. Are there MSDS sheets on file for all chemicals used by the business?

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Some MSDS on file
<input type="checkbox"/> 3 = All MSDS of file	<input type="checkbox"/> 1 = No MSDS on file
3. Is there a written drift management plan on file for use by applicators to minimize the occurrence and adverse effects of off target drift? (Encouraged by Reg. 637 R 285.637.10)

<input type="checkbox"/> 3 = Plan completed	<input type="checkbox"/> 2 = Conceived, but unwritten
	<input type="checkbox"/> 1 = Unfamiliar with drift management
4. If weather conditions favor off-target drift, are applications postponed? (Reg. 637 R 285.637.4.(i))

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Yes	<input type="checkbox"/> 1 = No
5. Is there a drift management plan referred to under less than favorable treatment conditions? (Reg. 637 R 285.637.10)

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Always	<input type="checkbox"/> 1 = Never
6. Are sensitive areas adjacent to the application site always identified? (Reg. 637 R 285.637.4)(j) *See description of sensitive areas below.*

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Always	<input type="checkbox"/> 1 = Never

Sensitive Areas Check

Sensitive areas include, but are not limited to:

- Occupied school buildings
- School playgrounds and athletic fields which are in use at the time of the pesticide application
- Developed recreation areas such as commercial campgrounds, picnic areas, roadside rest areas, maintained hiking trails, playing fields, or other areas developed for organized sports or recreation
- MDA – registered apiaries
- Water bodies including streams, rivers, ponds, and lakes
- Organic farms
- Health care facilities
- Commercial preschool and daycare facilities
- Posted school bus stops

Check the appropriate rating below:

1. Are precautionary measures used to prevent discharge of pesticides? (Reg. 637 R 285.637.4 (g))

____ Not Mandatory ____ 2 = Sometimes
____ 3 = Always ____ 1 = Never

2. Prior to making pesticide applications, does the operator check the Registry of Persons Requiring Notification Before Application of Pesticides to determine if the application site is listed on the adjacent property listing? The Michigan Department of Agriculture prints this registry by March 15, annually. (Reg. 637 R 285.673.5)

____ Not Mandatory ____ 2 = Sometimes
____ 3 = Always ____ 1 = Never

Basic Setup and Operation Guideline Priority List

Review this section and identify the areas that have a “1” or “2” rating and list below.

1. _____
2. _____
3. _____

Pre-Application Considerations

When determining action thresholds and properly matching the host plant and site characteristics with the most appropriate pesticide, do you consider the following factors in your management decisions?

- Yes No 1. Is the pest problem positively identified?
- Yes No 2. Is the pest present in a vulnerable life stage?
- Yes No 3. Is the treatment area measured accurately?
- Yes No 4. Have soil conditions that might impact the efficacy or stability of the pesticide been considered and accounted for such as highly organic soils, sandy soils, or high clay content soils?
- Yes No 5. Are special features of the site noted and accounted for when planning the pesticide application? Do you leave a buffer between your application area and these special features? If possible do you cover or remove these items from the treatment area?
These may include but are not limited to:
- Slope
 - Surface water features
 - Well heads
 - Structures (play equipment, toys, dog kennels, pet dishes, kiddie pools, sand boxes, etc.)
 - Laundry
 - Specimen, protected or sensitive plant material
- Yes No 6. Are the following things considered during the selection of the pesticide?
- Formulation
 - Packaging
 - Signal word
 - Run-off and leaching potential
 - Efficacy
 - Treatment intervals
 - Persistence
 - Availability of PPE required by pesticide label on Reg. 637, Rule9.

___Yes ___No 7. Do you verify that that the application site is listed on the pesticide label?

___Yes ___No 8. Has the pesticide label been completely read?

What is the most important environmental consideration when selecting a pesticide? _____

Pre-application Considerations Priority List

Please review any items in this section marked "NO" and identify any areas that need special consideration prior to application and list them below.

1. _____

2. _____

3. _____

Pesticide Handling Precautions

Be constantly aware of your exposure risks and risk to the environment when working with pesticides. Practice every precaution while mixing and loading and stay alert during the application. Follow through with safety measures as you clean up, store your materials and equipment, and finish your pesticide-related tasks.

Pesticide Handling Check

To determine your rating in each situation fill in the appropriate rating on the right to determine the level of risk. Choose a 1, 2, 3, or “Not Mandatory”. A “3” rating is considered in compliance. A “2” rating or a “1” rating is considered out of compliance and a “Not Mandatory” means that the rule does not apply to your operation.

1. Are label required personal protective equipment (PPE) available and used? (Act 451, Part 83, Section 8311 (7) and Reg. 637 R 285.637.9)

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Always	<input type="checkbox"/> 1 = Rarely
2. In the absence of label requirements, at a minimum, are long pants, protective footwear, long sleeved clothing, and gloves worn during pesticide handling activities? (If water or waterless soap are available, short sleeves are acceptable if allowed by label.) (Reg. 637 R 285.637.9)

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Always	<input type="checkbox"/> 1 = Rarely
3. If the applicator must walk into the path of a pesticide application, are shin-high boots or protective footwear with chemical resistant pants worn for extra protection?

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Always	<input type="checkbox"/> 1 = Rarely
4. Is a spill kit immediately accessible by persons mixing, loading or otherwise using pesticides? (Reg. 637 R 285.637.4(m))

<input type="checkbox"/> Not Mandatory	<input type="checkbox"/> 2 = Sometimes
<input type="checkbox"/> 3 = Always	<input type="checkbox"/> 1 = Rarely

5. Are spill kits on, in or readily available to the following: (Rule 637.4(m))

- Storage areas
- Mix and load pad
- On vehicles that transport pesticides
- On spray equipment

_____ Not Mandatory _____ 2 = Sometimes
_____ 3 = Always _____ 1 = Rarely

6. Does your spill kit have the ability to recover, minimize, contain, or absorb spills, leaks, releases, or other discharge of pesticides? (Reg. 637 R 285.637.2 (j) Definitions)

_____ Not Mandatory _____ 2 = Sometimes
_____ 3 = Always _____ 1 = Rarely

Pesticide Handling Precautions Priority List

Review this section and list the areas ranked “1” or “2”. Also, identify additional areas you would like to improve and list them below.

1. _____
2. _____
3. _____

Record Keeping

All commercial applicators applying pesticides in Michigan are required to keep verifiable records of those applications. The following questions present the minimum information required in the records and the situations in which they are required. (Act 451 Sec 8311 and Regulation 636.15)

1. Do you maintain records of the following information for all general-use pesticide applications for at least one year from the date of the application? (636.15.2)

- EPA Registration Number
- Pesticide product name and concentration
- Amount of pesticide applied
- Target pest, purpose, or crop site
- Date of application
- Address or location of application
- Method and rate of application

_____ Yes _____ No _____ Does not apply

2. Do you maintain records of the following information for all restricted use pesticide (RUP) applications for at least three years from the date of the application? (636.15.1)

- EPA Registration Number (New 2002 requirement)
- Pesticide product name and concentration
- Amount of pesticide applied
- Target pest, purpose, or crop site
- Date of application
- Address or location of application
- Method and rate of application

_____ Yes _____ No _____ Does not apply

The above information in the last two sections must be made available upon request to an authorized representative of the MDA during normal business hours.

If the firm employs registered technicians (registered applicators):

1. Does the firm have an approved trainer? This is only required if the firm is conducting training using a firm specific, MDA approved, registered technician training program. (636.11.1 and Act 451 Sec 8314)

_____ Yes _____ No _____ Does not apply

2. Does the firm have an MDA-approved registered technician-training program? This is an option and is not required. (636.8 and Act 451 Sec 8314)

_____ Yes _____ No _____ Does not apply

3. Are RUP applications done by registered technicians directly supervised by certified applicators? (636.10.1a)

_____ Yes _____ No _____ Does not apply

Drift Management Plan

1. If applications are performed where drift may land off property, do you have a drift management plan? (637.10.3)

_____ Yes _____ No _____ Does not apply

2. Do you maintain records of when and where a drift management plan was used? (637.10.5)

_____ Yes _____ No _____ Does not apply

3. Are the drift management records maintained for one year for general-use and three years for RUP applications? (637.10.5)

_____ Yes _____ No _____ Does not apply

Record Keeping Improvement Priority List

Please identify areas in this section that were marked “no” and additional areas that you would like to improve and list them below.

1. _____

2. _____

3. _____

Golf Turf Applications

1. Is there a general application sign located in the pro shop, mens and womens locker room, or registration area that includes a contact person and the statement that from time to time, pesticides are used in the management of turf and ornamental pests? (637.11.3a i - v)
_____ Yes _____ No _____ Does not apply

2. Are application signs placed at the first and tenth tees at the time of application until label specific reentry times expire or products are dried and the dust has settled? (637.11.3b)
_____ Yes _____ No _____ Does not apply

3. Do the application signs contain the following information: (637.11.3b)
 - Time and date of the application
 - Common name of the pesticide
 - Area treated
 - Label re-entry precautions
 - Name of contact person_____ Yes _____ No _____ Does not apply

Golf Turf Application Areas for Improvement

Identify areas in this section that are marked “no” and additional areas you would like to improve and list them below.

1. _____

2. _____

3. _____

Application Equipment

1. Is the application equipment in good mechanical condition? (637.4c)
 Yes No Does not apply
2. Is the application equipment free of leaks or malfunctions? (637.4c)
 Yes No Does not apply
3. Do you routinely calibrate the application equipment? (637.4d)
Be able to identify the frequency, method and record keeping of your calibration.
 Yes No Does not apply
4. Are there shut-off valves on the application equipment to prevent discharge? (637.4e)
 Yes No Does not apply
5. Is there a spill kit on the application equipment? (637.4m)
(Shovel and adsorbent material)
 Yes No Does not apply
6. Does the application equipment meet the pesticide label requirements? (Act 451, Part 83,
Section 8311.7 and Regulation 637.4.a)
 Yes No Does not apply

Application Equipment Improvement Priority List

Identify areas in this section that are marked “no” and additional areas you would like to improve and list them below.

1. _____
2. _____
3. _____

Pesticide Disposal

The disposal of pesticide containers or pesticide containing materials (PCM) is an important component of your operation. Examples of PCM's include: unclean pesticide containers, spill cleanup materials, tank rinsates and soil that contacted a pesticide.

1. Do you dispose of pesticide containers as directed on the pesticide label?
(Act 451, Part 83, Section 8311.7 and Regulation 637.8.3)
 Yes No Does not apply
2. Do you have a procedure for handling PCM's?
 Yes No Does not apply
3. Are PCM's applied to labeled sites. (637.8.1a)
 Yes No Does not apply
4. Are PCM's used as diluents? (637.8.1b)
 Yes No Does not apply

Pesticide Disposal Improvement Priority List

Identify areas in this section marked "no" and additional areas you would like to improve and list them below.

1. _____
2. _____
3. _____