



MAEAP Tips on Pesticide Storage and Handling

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MAEAP Technicians*

Agenda



- Intro to MAEAP
- Right to Farm GAAMPs
- Drift Management
- Pesticide Storage and Handling
- Emergency Planning
- Agrichemical Container Recycling/Clean Sweep
- Cost-share

MAEAP: Michigan Agriculture Environmental Assurance Program



MAEAP's Mission

To develop and implement a proactive environmental assurance program that targets all size Michigan farms and all commodities, ensuring that farmers are engaging in cost effective pollution prevention practices and working to comply with state and federal environmental rules and regulations.





This program is voluntary, free, and is suitable for both large and small farms. Everything we learn about a farm is 100% confidential. This is guaranteed by state law.

The MAEAP Process



Education



On Farm
Risk
Assessment



Third Party
Verification



MAEAP
Verified



The Systems of MAEAP



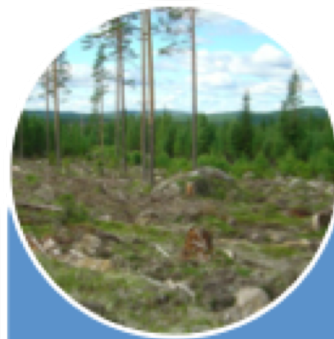
Farmstead



Cropping



Livestock



Forest,
Wetland and
Habitat (FWH)

What Does MAEAP Do?

- Demonstrates a farm's compliance with the GAAMPs
- Ensures safe storage of fuel, fertilizer and chemicals
- Balances efficient production and sound environmental practices
- Provides tools and resources to help farms improve their operations
- Maximizes fertilizer use
- Supports good relationships with consumers and neighbors
- Helps to protect the Great Lakes and other natural resources



Right to Farm GAAMPs



- “The Michigan legislature passed into law the Michigan Right to Farm Act (PA 93 of 1981, as amended), which requires the establishment of Generally Accepted Agriculture and Management Practices (GAAMPs). These practices are written to provide uniform, statewide standards and acceptable management practices based on sound science. These practices can serve producers in the various sectors of the industry to compare or improve their own managerial routines. New Scientific Discoveries and changing economic conditions may require necessary revision of the practices.”
- “Agricultural producers who voluntarily follow these practices are provided protection from public or private nuisance litigation under the Right to Farm Act”

GAAMPs for Pesticide Utilization and Pest Control



- Pesticide Labels
- Certification
- Application Equipment, Methods, and Pesticide Formulations
- Equipment Use and Calibration
- Worker and Handler Safety
- Alternative Pest Management Techniques
- Protection of the Environment
- Agriculture Pollution Emergencies
- Excess Spray Mixtures and Rinsates
- Mixing/Loading
- Application and Standards for Use
- Record Keeping
- Transport of Pesticides
- Disposal of Unused Pesticides
- Disposal of Pesticide Containers
- On Farm Storage and Containment of Pesticides
- Pesticide Use Recommendations and Technical Assistance



Michigan Department of
**AGRICULTURE
& Rural Development**

**Generally Accepted Agricultural
and Management Practices for
Pesticide Utilization and
Pest Control**

January 2018

Michigan Department of Agriculture
& Rural Development
PO Box 30017
Lansing, MI 48909

PH: (877) 632-1783
www.michigan.gov/mdard

Some Key Points from GAAMPs



- Equipment Use and Calibration
- Protection of the Environment
- Agriculture Pollution Emergencies
- Applications and Standards for Use
- Record Keeping

RECORD KEEPING

Farm operators should maintain accurate records of all agricultural crop applications of pesticides for at least three years, and preferably five years.

The federal pesticide recordkeeping regulations, the federal worker protection standards, and the Michigan Right to Farm current GAAMPs all have requirements related to pesticide recordkeeping. The following table is intended to clarify which data are required for each. The federal recordkeeping regulations and worker protection standards are laws. Right to Farm GAAMPs are voluntary guidelines.

USDA Record Keeping Regulations (Redkp)

The data required by these regulations must be kept by private pesticide applicators for each restricted use pesticide application.

Worker Protection Standards (WPS)

The information listed in the table must be posted for at least 30 days after the end of the restricted-entry interval (REI), or, if there is no REI, for at least 30 days after the end of the application.

Michigan Right to Farm (RTF)

A portion of the Right to Farm document addresses pesticide recordkeeping. By following these voluntary guidelines, producers can reduce their liability.

Table Comparing Record Keeping Requirements for Private Pesticide Applicators

Federal Recordkeeping Regulations (Redkp), Worker Protection Standards (WPS), Michigan Right to Farm (RTF)

Data to Record	Redkp	WPS	RTF
Month/day/year	x	x	x
Time of application		x	
Pesticide brand/product name	x	x	x
Pesticide formulation			x
EPA registration number	x	x	x
Active ingredient(s)		x	
Restricted-entry interval (REI)		x	
Rate per acre or unit			x
Crop, commodity, stored product, or site that received the application	x		x
Total amount of pesticide applied	x		x
Size of area treated	x		x
Applicator's name	x		x
Applicator's certification number	x		x
Location of the application	x	x	x
Method of application			x
Target pest			x
Carrier volume per acre			x

Developed by the Michigan State University Pesticide Education Office

Drift Management



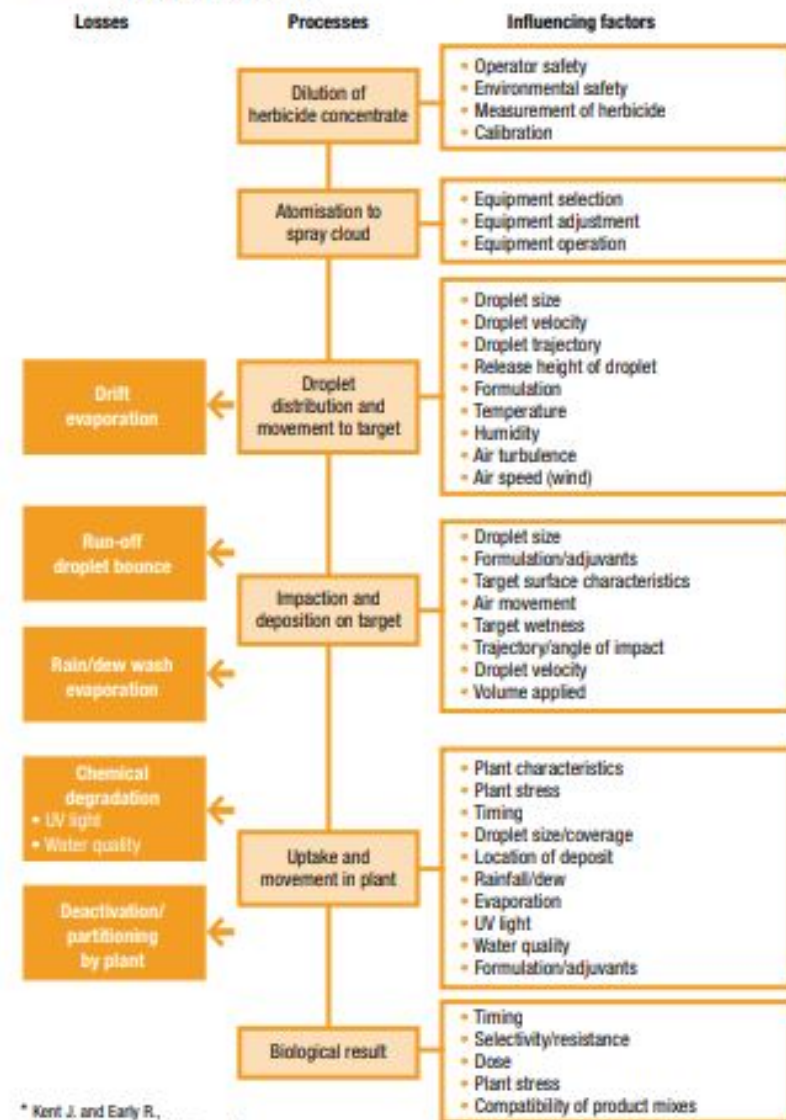
- “A Drift Management Plan shall be in writing, and MDARD will consider the presence and use of a written drift management plan as a factor in determining appropriate enforcement action in the event of drift.”
- Components:
 - Procedures used when applying pesticides
 - Procedures used when off-target drift is anticipated due to the nature of the application
 - Procedures used when off-target drift is NOT anticipated, but does occur.
 - Review of plan by applicators
 - Site Record Sheet
 - List of neighboring property owners and contact information

Drift Management Continued



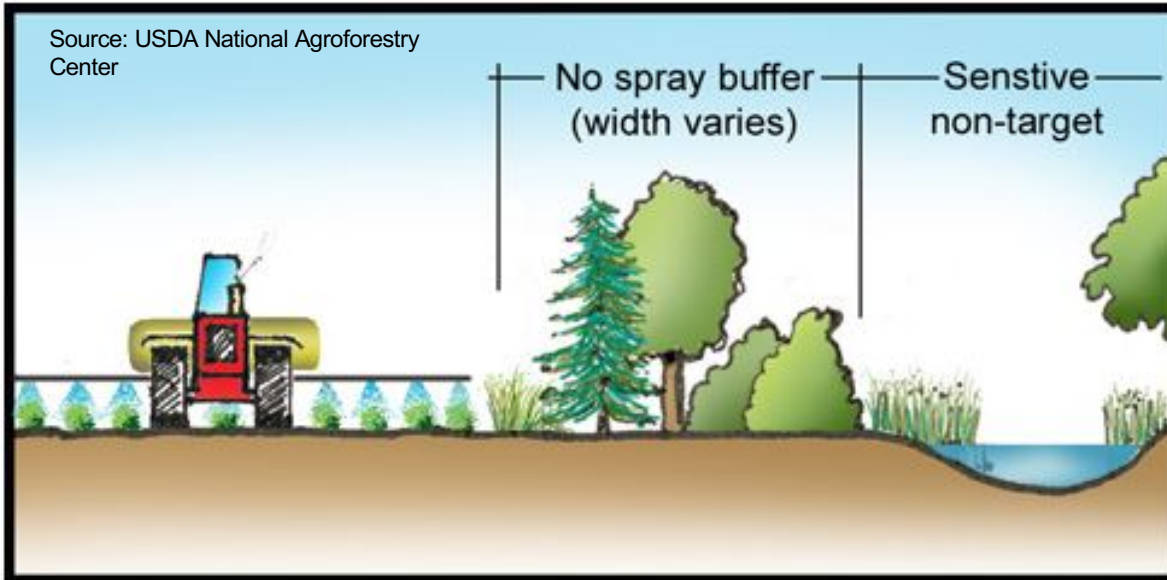
- Factors affecting spray drift
 - Spray characteristics
 - Equipment and application
 - Weather, wind, topography, etc.

FIGURE 1 THE FACTORS AND PROCESS THAT INFLUENCE SPRAY DROPLET LOSSES*



* Kent J. and Early R., Pesticide Application in Vineyards, 2nd edition 1999

Sensitive Areas



Michigan Sensitive Areas Identification System Report

Report Name: Example

Report Summary

The Michigan Sensitive Areas Identification System has conducted an analysis of the field you selected. Results are based upon the field's physical characteristics (e.g., soils, slope) and any answers you provided in the questionnaire. After reviewing this report, it is recommended that you contact your local NRCS Field Office and further pursue the recommended practices presented to you in this report.

Location Summary

County Name: Alcona Township Name: Caledonia
 Township, Range, & Section: 28N 07E 13 Area: 9.4 acres
 Watershed Name: Hubbard Lake-Lower South Branch Thunder Bay River

Identified Risks

Manure Runoff Phosphorus Runoff

Michigan Phosphorus Risk Assessment

Assessed value: 50

Explanation:

Risk of phosphorus leaving the field is HIGH. There is a high potential risk of offsite phosphorus movement, and no manure or fertilizer phosphorus should be applied to the field. (An exception to fertilizer phosphorus application when receiving a high risk is allowed under MSU Extension Bulletin E2904, when starter phosphorus is applied to field corn.)

High: >17
Medium: 12-17
Low: 0-11

Manure Application Risk Assessment

Value

Explanation:

MEDIUM potential for manure movement from the field. The chance of organic material and nutrients getting to surface water is likely. Buffers, setbacks, lower manure rates, cover crops, crop residues, etc. in combination may reduce impact. These fields have limited potential for winter spreading and only a partial area of the field may be acceptable.

High: > 75
Medium: 38-75
Low: 19-37
Very Low: <19

Date: 2-1-2019

Pesticide Storage and Handling



- Storage:

- Isolation from water sources
- Impermeable floor surface
- Securable, Signage
- Spill Kits
- Extremely Hazardous Substances, Emergency Plan
- Container condition, disposal



- Handling

- Mixing/loading, monitoring, measuring devices
- Backflow prevention
- Excess spray mixture/building waste water



Emergency Planning



- Filing Instructions
- Spill Kits
- Reporting
- Farm emergency contact info
- Agency emergency numbers
- Farmstead and neighborhood maps
- Agrichemical information
- Farm response resources
- Emergency action plans for manure, fertilizer, and pesticide spills
- Spill or release report
- Security and safety Info
- **By law, MAEAP verified farms don't won't suffer civil fines or penalties for accidental discharge if reported and addressed, just resource clean up.**

E-2575 • March 2017 • Minor Revisions • Destroy Old



Emergency Planning for the Farm

MICHIGAN STATE UNIVERSITY

Extension



Your Emergency Farm Plan

Section II. Map Information

Complete two maps for each site (farmstead and neighborhood maps).

Map the farmstead site (or other part of the farm where agrichemicals are stored) and label the following:

Buildings/structures location

Barns, houses, shops, outbuildings, silos, grain bins, manure storage/pits, livestock barns (note if manure storage below), refrigeration compressors, upright or bunker silos

Land features

• Roads and crossroads, driveways and lanes, fences and gates
• Wells and/or municipal water supply, hydrants, ponds, streams, rivers, lakes and wetlands

• Septic tanks, wastewater systems, cisterns
• Drainage ditches, culverts, surface drains
• Slope of land (drainage direction)
• North direction

Chemical/Fertilizer/Fuel storage

Identify where chemicals, fertilizers, and fuel are stored.

Use these symbols to show locations:

AST – Aboveground storage tank
CG – Compressed gasses (oxy/acetylene)
E – Main electrical shutoff
EP – Emergency plan contained in Michigan emergency tube or key-box (see Glossary on page 27)
G – Main gas shutoff
LP – Liquid propane (note if buried)
RU – Refrigeration units/compressors and coolant type
UST – Underground storage tank
Well – Farm water well

North ↑
Sample Farmstead Map



North ↑
Sample Neighborhood Map



Pesticide Container Recycling



See flyer in binder for 2019
recycling dates!

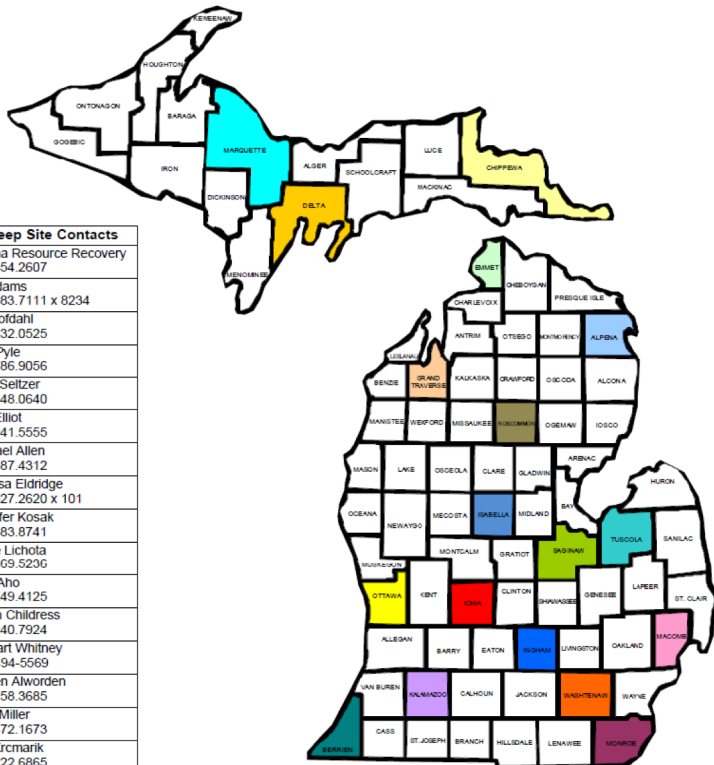
Clean Sweep – Old Pesticides



Local Clean Sweep Sites



MICHIGAN AGRICULTURE ENVIRONMENTAL ASSURANCE PROGRAM
**CLEAN SWEEP - FREE PESTICIDE DISPOSAL FOR
 MICHIGAN RESIDENTS AND BUSINESSES – FY15**



Clean Sweep Site Contacts	
1	Alpena Resource Recovery 989.354.2607
2	Jill Adams 269.983.7111 x 8234
3	Cal Lofdahl 906.632.0525
4	Don Pyle 906.786.9056
5	Elisa Seltzer 231.348.0640
6	Kim Elliot 231.941.5555
7	Michael Allen 517.887.4312
8	Melissa Eldridge 616.527.2620 x 101
9	Jennifer Kosak 269.383.8741
10	Steve Lichota 506.469.5236
11	Rick Aho 906.249.4125
12	Jason Childress 734.240.7924
13	Stewart Whitney 616-494-5569
14	Steven Alworden 989.758.3685
15	Mike Miller 989.672.1673
16	Jeff Krcmarik 734.222.6865
17	Barb Stauffer 989-275-3163
18	Crystal Beutler 989-772-9152 x 3

Clean Sweep Program 2015 Directory

<p>Diane Rekowski Alpena County/ NEMCOG Alpena Resource Recovery Facility 4395 W M-32 Alpena, MI 49707 989.354.2607 drekowski@nemcog.org http://www.nemcog.org/recycling.asp</p>	<p>Michael Allen Ingham County Ingham County Health Department 5303 South Cedar Lansing, MI 48909 517.887.4312 he_allen@ingham.org http://hd.ingham.org/Home/EnvironmentalHealth.aspx</p>	<p>Jason Childress Monroe County Monroe County Health Department 2353 South Custer Rd. Monroe, MI 48161 734.240.7924 Jason_childress@monroemi.org http://www.co.monroe.mi.us/government/departments/offices/public_health/solid_waste_management.html#HHW</p>
<p>Jill Adams Berrien County Berrien County Community Development Administration Center 701 Main Street St. Joseph, MI 49085 269.983.7111 x 8234 jadams@berriencounty.org www.berriencounty.org/recycle</p>	<p>Melissa Eldridge Ionia County Resource Recovery 431 Swartz Ct. #300 Ionia, MI 48846 616.527.2620 x 101 melissa.eldridge@mi.nacdn.net www.ioniacd.org</p>	<p>Stewart Whitney Ottawa County Ottawa County Environmental Health Dept. 12251 James St., Suite 200 Holland, MI 49424-9661 616.494.5569 SWhitney@miottawa.org http://www.miottawa.org/leathComm/leath</p>
<p>Cal Lofdahl/ Kathy Bensei Chippewa County Chippewa Recycling Center 1423 West Easterday Avenue Saut Ste. Marie, MI 49783 906.632.0525 recycling@sault.com http://northerntransitions.org/recycling.html</p>	<p>Crystal Beutler Isabella County Isabella County Conservator District 5979 East Broadway Road Mt. Pleasant, MI 48856 989.772.9152 x 3 cryslal.beutler@mi.nacdn.net</p>	<p>Barb Stauffer Roscommon County Crawford-Roscommon Conservation District 500 Lake Street Roscommon, MI 48653 989-275-3163 barb.stauffer@macd.org http://www.roscommoncounty.net/wp-content/uploads/2014-June-HHW-flyer.pdf</p>
<p>Don Pyle/ Cindy Rivers Delta County Delta Soil Waste Management Authority PO Box 198 Escanaba, MI 49829-0198 906.786.9056 dnp@dswma.org http://www.dswma.org/index.php?page=waste&azarticles.nbn&nprint=1</p>	<p>Jennifer Kosak Kalamazoo County Kalamazoo County Health & Community Services Department 1301 Lamont Avenue Kalamazoo, MI 49048 269.383.8741 jkosak@kalamazoo.com http://www.kalamazoo.com/HHW/index.htm</p>	<p>Steven Alworden Saginaw County Saginaw County Department of Public Health 1600 North Michigan Saginaw, MI 48602 989.758.3685 salworden@saginawcounty.com http://www.saginawpublichealth.org/page.asp?D=33&nID=6</p>
<p>Elisa Seltzer Emmet County Emmet County Department of Public Works 200 Division Street, Suite G-76 Petoskey, MI 49770 231.348.0660 eseltzer@emmetcounty.org http://www.emmetcounty.org/household-chemical-drop-off-121/</p>	<p>Steve Lichota Macomb County Macomb County Health Department 43525 Elizabeth Mt. Clemens, MI 48013 586.469.5236 stleve.lichota@macombgov.org http://www.macombcountymi.gov/publichealth/householdWaste.htm</p>	<p>Mike Miller Tuscola County Tuscola County Recycling 1123 Mertz Caro, MI 48723 989.672.1673 recycle@tuscolacounty.org http://www.tuscolacounty.org/recycling/events.php</p>
<p>Kim Elliott Grand Traverse County Grand Traverse County Resource Recovery Department "RecycleSmart" 2650 LaFranier Road Traverse City, MI 49686 231-941-5555 kelliott@grandtraverse.org www.recyclesmart.info</p>	<p>Rick Aho Marquette County Marquette County Solid Waste Department 600 County Road NP Marquette, MI 49855 906.249.4125 swaste@ironbay.net www.mcswma.com</p>	<p>Jeff Krcmarik Washtenaw County Washtenaw County Environmental Health Department 705 N Zeeb Rd Ann Arbor 48107-8645 734.222.6865 krcmarj@washtenaw.org http://recycle.ewashtenaw.org</p>

NRCS Cost Share through EQIP



MAEAP Cost Share



More Cost Share





This Farm is
Environmentally
Verified

Michigan
Agriculture
Environmental
Assurance

Michigan farmers are proud to be recognized
for their stewardship!

www.maeap.org

MAEAP Contacts



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