



AEM Tier 2 Worksheet

Pesticide Storage, Mixing & Loading

Glossary

Anti-Siphoning Device: a mechanism to prevent pesticide contamination of water, which can occur when a loss of pressure in the main water line creates a backflow of contaminated water into the water supply system.

Aquifer: A water-bearing soil or rock formation that is capable of yielding usable amounts of water.

Aquifer Recharge Area: Land area where water readily seeps into the aquifer.

Back-flow Protection: Use of a device, such as a reduced pressure zone device or an air gap separation between a water source and the overflow of a receptacle (i.e. -- spray tank, mixing tank, etc.) containing pesticides, to prevent contaminated water from siphoning back into a water supply.

Emergency Action Plan: A farm-specific response plan for pesticide storage, transport, and application. It includes response and discharge reporting protocols, emergency numbers, available equipment, employee training, and other information necessary for effective response.

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Background

Handling pesticides around the farmstead should meet or exceed label instructions. If not, leaks or spills can result in pesticides seeping into groundwater or potentially runoff into surface waters. Pesticides can also enter a well directly during mixing and loading if proper precautions are not taken. The federal government and the state of New York regulate all agricultural pesticides to protect farmers, their employees, the environment and the health of the public. The water quality on and around your farm is better protected if appropriate management procedures are followed. Also, proper disposal of containers and unused pesticides are essential to avoid risking contamination that could affect water supplies, human health, livestock health and wildlife.

All pesticides used in the United States must be registered by the US Environmental Protection Agency (EPA), assuring that they will be properly labeled and that they will not result in any unreasonable adverse effects on humans, the environment or non-target species. In New York State, pesticides must also be registered with the Department of Environmental Conservation, who oversee Pesticide Applicator Certification. These regulations ensure that pesticides used and stored in New York are properly labeled and responsibly applied. In addition, farms that store and mix pesticides are encouraged to have and follow an Integrated Pest Management (IPM) Plan as a means to help them make the best choices for their crops, livestock and the environment.

AEM Principle:

Methods and procedures for the storage, mixing and loading of pesticides in farming operations should ensure that their discharge to surface and groundwater is prevented to the greatest practical extent. In addition, farm operations must be in compliance with state and federal laws and regulations, and with the applicable label requirements.

Glossary Continued...

Integrated Pest Management (IPM): A comprehensive approach to pest control that uses combined means to reduce the status of pests to tolerable levels while maintaining a quality environment. Each employed pest control technique must be economically sound, and compatible with production and user objectives. IPM incorporates all reasonable measures to prevent pest problems by properly identifying pests, monitoring population dynamics and utilizing cultural, physical, biological or chemical pest control methods to reduce pests to acceptable levels.

Material Safety Data Sheet (MSDS): a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the specific chemical product. It also contains information on the use, storage, handling and emergency procedures all related to the hazards of the material.

Pesticide: Any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any insects, rodents, fungi, weeds or other forms of plant life, animal life or viruses which the NYS Department of Environmental Conservation has declared to be a pest; and any substance or mixture of substances intended as a plant regulator, defoliant or desiccant.

Rinsate: Water or the pesticide carrier that is used to rinse out the application equipment and pesticide containers after a particular pesticide or mixture of pesticides has been applied.

Tub-stored: Pesticide containers are stored inside an impermeable tub.

Background Continued...

The harmful nature of misused or spilled pesticides requires all handlers to comply with State and Federal laws. Depending on the quantity and use intention of these products, the farm operation may be required to adhere to additional storage and containment protocols.

If a farm business falls into any of the following categories, it may need to comply with the US EPA's Pesticide Container and Containment Rule:

You handle agricultural pesticides and are:

- A refilling establishment whose principal business is retail sale, and/or
- A commercial pesticide applicator, and/or
- A custom blender.

Information on this Rule can be found at:

- ***Pesticide Container and Containment Rule:***
<http://www.epa.gov/opp00001/regulating/containers.htm>
- ***A Snapshot of the EPA Pesticide Container and Containment Rule***
<http://www.epa.gov/opp00001/regulating/ccrule-brochure.pdf>

AEM Tier 2 Worksheet: Pesticide Storage, Mixing & Loading		Potential Concern		
Factors Needing Assessment:	Lower 1	2	3	Higher 4
Is there a designated pesticide storage area on the farm?	Pesticides are stored in a dedicated building, separated by type of pesticide and according to label instructions.	Pesticides are stored in a multiple-use building, separated by type of pesticide and according to label instructions.		Pesticides are stored in an insecure area. <p style="text-align: center;">OR</p> Insecticide, fungicides and herbicides are stored together. <p style="text-align: center;">OR</p> Pesticides are not stored according to label instructions.
Where are pesticides stored?				
What is the structural integrity of the pesticide storage structure (e.g.. roof condition, floor condition, security of door, etc)?				
What is the condition of pesticide storage containers?	Pesticides kept in original containers in good condition with original readable labels.		Pesticides are not stored in original containers, but are stored in appropriate containers with proper, legible labels.	Pesticides are kept in original containers in poor condition or with unreadable or missing labels. <p style="text-align: center;">OR</p> Pesticides are not stored in original containers and labels are unreadable or missing.
If stored pesticides are no longer used, are the pesticide containers or drums in stable condition?				
What security measures are taken at the storage area?	Area is locked, fenced, and properly posted for pesticides.	Area is locked and posted for pesticides.		Area is not secured. <p style="text-align: center;">OR</p> Area is not posted for pesticides.

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Factors Needing Assessment:	Lower 1	2	3	Higher 4
What is the condition of the floor in the pesticide storage/mixing area?	Pesticides are stored and mixed on impermeable floor (e.g.-sealed concrete) with curbs or dikes that would contain the larger of 250 gallons or 125% of the largest pesticide holding tank		Pesticides are stored and mixed on impermeable floor, with no curbs or dikes to contain leaks. AND Pesticides are tub-stored in containers.	Pesticides are stored and mixed on permeable floor, e.g. – gravel, dirt or wood.
Is there a floor drain in the storage/mixing area?	No floor drain, AND/OR Floor sumps to a collection area integral to the floor for proper disposal or usage.	Sealed floor drain leads to a holding tank 125% of the largest pesticide containing tank by gravity	Floor drain or sump is pumped to a holding tank sized 125% of largest pesticide holding tank	The floor drain does not lead to an acceptable holding tank.
What is done with unwanted or banned pesticides?	Disposed of through a hazardous waste collection event or service. OR Unused pesticide returned to dealer.			Unwanted pesticides are disposed of on the farm, OR Are stored on the farm.
How is the water supply protected during mixing?	Appropriate anti-siphoning device is used. AND Water is taken away from the water source before mixing with pesticides.	Appropriate anti-siphoning device is used.		No anti-siphoning device. AND Water is taken directly from a well, pond or stream.

AEM Tier 2 Worksheet: Pesticide Storage, Mixing & Loading		Potential Concern		
Factors Needing Assessment:	Lower 1	2	3	Higher 4
<p>What is the proximity of the in-field mixing/loading area to wells, springs and watercourses?</p> <p><i>(Skip if no in-field mixing or loading is practiced.)</i></p>	<p>Mixing/loading area is not sited in an aquifer recharge area of a well or spring.</p> <p style="text-align: center;">AND</p> <p>Mixing and loading is done at least 200 ft. from any watercourse, in a specified area designed to NRCS Standard NY309 – Agrichemical Handling Facility and according to label instructions.</p> <p style="text-align: center;">OR</p> <p>Mixing and loading is done using a manufactured portable mixing facility and according to label instructions.</p>		<p>Mixing/loading area is not sited in an aquifer recharge area of a well or spring.</p> <p style="text-align: center;">AND</p> <p>Mixing and loading is done further than 100 ft. from any watercourse and according to label instructions.</p>	<p>Mixing and loading is not done using a manufactured portable mixing facility and according to label instructions.</p> <p style="text-align: center;">AND</p> <p>Mixing/loading area is sited in an aquifer recharge area.</p> <p style="text-align: center;">OR</p> <p>Mixing and loading is done within 100 ft. of a watercourse.</p> <p style="text-align: center;">OR</p> <p>Mixing and loading is not done according to label instructions.</p>
<p>How are pesticide products transported to fields (e.g. pre-mixed in a sprayer of good condition, in concentrate in vehicle, etc.)?</p>				
<p>Are all transported pesticides properly labeled?</p>				
<p>How is sprayer rinse water disposed?</p>	<p>Sprayer rinsate is properly stored and labeled for use in later applications to crops labeled for the pesticide.</p>	<p>Rinsate is not stored and sprayed back on a crop labeled for the pesticide.</p>		<p>Sprayer rinsate is disposed of on the farm in some other way. (e.g. sprayed along fence lines).</p>

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Factors Needing Assessment:	Lower 1	2	3	Higher 4
What is the quantity of pesticides usually stored between growing seasons?				
How and where are pesticide containers disposed?	Properly rinsed containers are returned to dealers. OR Appropriate hazardous waste recycling service is used.		Properly rinsed containers or empty bags are disposed of at a licensed solid waste management facility.	Unrinsed or partially-filled plastic or paper containers are burned or disposed of in other ways on the farm. OR Stockpiled on the farm.
Have you considered purchasing pesticides in mini-bulk or returnable containers to reduce the number of containers requiring disposal?				
Has an emergency action plan been developed should a pesticide spill/major leak, fire or natural disaster occur? If yes, does it include an up to date inventory of all pesticides stored or being transported? Are all employees aware of the plan?				
Are Material Safety Data Sheets (MSDS) and labels printed and kept on file?				
Benefits to other resources can also be possible while working toward improved water quality. Taking stock of how existing and future management affect soil, water, air, plants, animals, energy, greenhouse gases, people, and economics can result in more effective plans and additional benefits to farms and communities both now and into the future. Additional Comments:				