VII. Pesticide Management

This section covers procedures for safe storage, mixing and loading, and handling of pesticides to protect worker health and avoid the potential for contamination of wells, groundwater, and ponds.

Managing mixing and loading processes to protect health and contain or avoid spills is particularly important, since pesticides are most concentrated before they are mixed in the spray tank. Simple precautions described in this section can greatly reduce the risks to worker safety and reduce the potential for spills and groundwater contamination. Use of worker protection standards (WPS) to provide worker protective equipment, signage, and decontamination sites is mandated by Environmental Protection Agency (EPA) and New York Department of Environmental Conservation (DEC) regulations.

Storage mixing and loading guidelines described in this section were developed in cooperation with the Long Island Stewardship Program and the New York Agricultural Environmental Management Program. Cost-sharing through local Soil and Water Conservation Districts for improving mixing, loading, and storage facilities has assisted growers in financing improvements in the past and may be available in the future.

Pesticide Storage

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
What type of storage shelving is in place?	Metal or plastic, with lips to prevent tumbles, heavy containers on lowest shelves. AND Powders are stored on upper shelves, liquids on lowest shelves.		Wood covered with epoxy paint or plastic sheet, heavy containers are on high and low shelves.	Bare wood with no lip, heavy containers are on the highest shelves. OR No shelves, pesticide containers are on the floor.	
What is the condition of the floor in the pesticide storage area?	Impermeable floor (e.g. sealed concrete) with curbs or dikes to contain leaks/spills.	Impermeable floor without curbs or dikes, but containment pallets or spill-proof trays with lips are used.	Impermeable floor without curbs or dikes to contain leaks.	Permeable floor (e.g. gravel, dirt or wood).	

Pesticide Storage

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
What security measures are taken at the storage area?	Area is locked or fenced. AND Separate from all other activities. AND Used only for pesticides. AND Posted with appropriate signage.	Area is separate from other activities. AND Used only for pesticides. AND Posted with appropriate signage.	Area is separate from other activities. AND Used only for pesticides.	Area is open to other activities that could damage containers or spill chemicals or allow entry of unwanted persons.	
What is the storage duration of pesticides?	Pesticides are purchased and used in full as needed.	Pesticides are stored during the growing season.	Pesticides are stored for two seasons.	Pesticides are stored for more than two seasons.	
What is the condition of the containers?	Original containers are clearly labeled – no holes, tears, weak seams or missing lids/caps.		Pesticides are in their original containers but have unreadable or missing labels.	Pesticides are not in their original containers. OR Containers have rust, holes or tears that allow chemicals to leak.	

Loading and Mixing Practices

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
What is the proximity of the mixing/ loading area to wells, surface water and watercourses?	Mixing and loading is done down slope and at least 200 ft from any well, surface water or watercourse on an approved agrichemical mixing facility.	Mixing/loading area is done down slope and at least 100 ft from any well, surface water or watercourse on an approved agrochemical mixing facility.	Mixing/loading area is done down slope and at least 100 ft from any well, surface water or watercourse.	Mixing/loading is within 100 ft of a well, surface water or watercourse.	
The NRCS AMF standard NY-702 requires a minimum of 100 feet from private wells or surface water-bodies to the mixing pad. At least 200 feet will lower the risk and is suggested whenever feasible.					
Is a spill kit available?	A spill kit is readily available and fully stocked.	A spill kit is readily available but used – remaining contents depleted/unknown.	Operator has a spill kit, but it is not readily accessible.	No spill kit is available.	
How are spills handled?	Spills are cleaned up immediately.			Spills are not dealt with until major time has elapsed or not at all.	
A spill kit should contain personal protection equipment (PPE), shovel, broom, dustpan, absorbent material, heavy-duty detergent, a sturdy plastic container and emergency telephone numbers. Source: AEM Tier II Worksheets for the Long Island Agricultural Stewardship Program.					

Loading and Mixing Practices

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
What type of mixing and loading area is used?	All mixing and loading is done on an impermeable pad with a curb that keeps spills contained and holds 125% of maximum chemical volume. Sumps allow collection and transfer to storage or back into sprayer for field application. The facility meets or exceeds the standards for an approved agrichemical mixing facility.	All mixing and loading is done on an impermeable pad without curb or sump. OR In-field mixing is done in a different location every time.	Most mixing and loading is done in the field at a different location most of the time or switched frequently.	There is no mixing/ loading pad. AND Mixing and loading done in the same location every time.	

Loading and Mixing Practices

	1 - Low Risk	2	3	4 - High Risk	YO
What is the water source for pesticide applications? Is a proper anti-backflow device in place?	Water is obtained from a well dedicated to farm use and water used to fill the spray tank is from a nurse tank. Water from farm pond fills nurse tank at least 100 ft from open water (pond or stream). A RPZ device is in place or an air gap equal to twice the diameter of the filler source pipe above the sprayer tank is installed to prevent backflow.	Water is obtained from a well dedicated to farm use, and spray tanks are filled directly from the well. Water is brought directly from a pond but the filling area is at least 100 ft from open water. A RPZ device or air gap equal to twice the diameter of the filler source pipe above the sprayer tank is in place to prevent backflow.	Water is obtained from a well used for drinking water. Pond water filling area is <100 ft from open water. OR A RPZ device or an air gap equal to twice the diameter of the filler source pipe above the sprayer tank is in place to prevent backflow. BUT Spray tanks are filled directly from the well or pond.	Water is obtained from a well used for drinking water. Pond water filling area is adjacent to the pond. OR A RPZ device or suitable air gap is not in place. AND Spray tanks are filled directly from the well or pond.	

Regulations concerning use of surface water (ponds) for filling sprayers vary. Long Island vineyards exclusively use wells or municipal water supplies. In other areas, growers commonly use water pumped from ponds, particularly where wells or municipal water supply are not available. When ponds are used as a source, the filling area should be below the grade of the pond, and at least 100 feet away from surface water. Nurse tanks are recommended, because they reduce the amount of time it takes to fill spray tanks.

An acceptable Reduced Pressure Zone (RPZ) device contains a minimum of two independently acting check valves with an automatically operated pressure differential relief valve between the two check valves.

Loading and Mixing Practices

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
Is filling supervised by a certified applicator?	A certified applicator does the mixing and loading. A certified applicator provides constant supervision. OR	A certified applicator has provided appropriate training for mixers and loaders and is available for consultation as needed.	Supervision is provided most of the time.	Supervision is provided seldom or never.	
How is the sprayer cleaned and how is rinsate disposal handled?	An in-field cleaning system is used. Rinsate is applied to labeled crops.	Sprayer is washed on a pad at the farmstead. Rinsate is applied to labeled crops.	Sprayer is washed at the farmstead (not on a pad), and rinsate is sprayed back onto the vineyard following label recommendations.	Sprayer is washed at the farmstead. Rinsate is dumped at farmstead or in field sump or adjacent to streams or waterways or is sprayed along a fence line or hedgerow.	
Is an inspection and emergency plan in place? ***Emergency phone numbers are required to be posted in a central location – WPS regulation.***	Plumbing and well connections are inspected before each day of use for breaks and leaks. Emergency plan is centrally posted with telephone numbers. Equipment for fire or spills is reviewed and checked annually.		Plumbing and well connections are inspected only when there are breaks and leaks. Emergency plan and telephone numbers known but not posted. Equipment for fire or spills is in place but not reviewed or checked.	Plumbing and well connections are never inspected. No emergency plan or phone numbers are in place. AND/OR	

Pesticide Containers

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
How is the disposal of pesticide containers handled?	Triple-rinsed or power-rinsed containers are returned to a supplier for recycling. Bags are returned to a supplier, or an appropriate waste collection service is used.	Triple-rinsed containers are disposed of through an appropriate waste collection service as per label instructions.	Triple-rinsed containers are stored or disposed of on the farm.	Unrinsed containers or empty bags are stored or disposed of on the farm. Pesticide containers are burned on the farm. OR	
What type of pesticide containers is purchased?	Where available, all pesticide products are purchased in recyclable or returnable containers to reduce the number of empty containers that require disposal.	Some pesticide products are purchased in recyclable or returnable containers.	Most pesticides are purchased in containers that require special handling or treatment before disposal.		

Pesticide Use					
	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
What is done with unwanted or banned pesticides?	Participate in an EPA/ DEC "return" program, and unused pesticides are returned to a dealer or disposed of through a hazardous waste collection service. NYS labeled materials may be given to an appropriate user for use on labeled crops.			Unused pesticides are disposed of on your property or at a local garbage dump. Unused pesticides are stored indefinitely on the farm. OR	

Pesticide Use

	1 - Low Risk	2	3	4 - High Risk	YOUR RANK
What is the distance of spray application from water bodies?	Label restrictions are followed, or if not stated on label, spray is applied at least 35 ft from open water source.		Spray is applied less than 35 ft from an open water source.	Spray is applied adjacent to or over top of open water.	
How well are pesticide records kept?	Pesticide use records include: • Pesticides used • EPA registration # • Where applied • Date applied • Quantity applied • Rates applied • Method of application • Applicator's name • Target pest • Weather conditions • Stage of crop development • Stage of pest development • Apparent effectiveness AND	Pesticide use records include only records necessary for DEC reporting: • Pesticides used • EPA registration # • Where applied • Date applied • Quantity applied • Rates applied • Method of application • Applicator's name • Target pest		No records are kept. Chemicals used are known by memory or through invoices only.	