



# Waste Disposal

## Introduction

Agricultural operations produce a wide variety of products that are utilized by people on a daily basis. Like all other input-output production processes, various wastes are generated in the production process that require proper disposal. There are a number of products used by farmers that can generate waste which requires proper disposal to ensure a clean and healthy environment, as well as, safe drinking water. These include: pesticides, cleaners, solvents, oils, batteries, plastics, tires, etc. Dead animal disposal can also be an environmental issue. If proper measures are not taken hazardous and biologically-active compounds can leak or spill, threatening contamination of surface or ground water sources.

## Environmental Concerns

Improper disposal of farm waste such as pesticides, cleaners, solvents, oils, batteries, plastics, and dead animals can threaten surface and groundwater supplies.

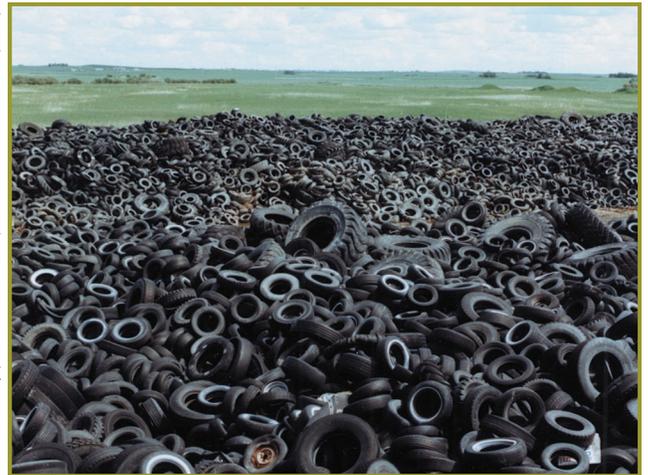


“Improper disposal” can include discarding chemicals and containers in farm dumps, burning chemical containers and plastics, leaving animal carcasses outside to naturally decompose, or inappropriate composting/burial of dead animals. If any of these practices were to contaminate water resources, even in trace amounts, they could cause serious health hazards to humans, pets, livestock, fish, and wildlife. In

addition to threatening drinking and recreational water, inappropriate disposal of waste often create aesthetic and air quality concerns for neighbors and the community, and attracts unwanted insects, vermin, and scavengers into the area.

## Potential Economic Benefits

First and foremost, keeping a farm clean and free of litter or debris will help develop and/or maintain good relationships with neighbors and the community. Good waste disposal practices can also enhance the property value of the farm, positively impact the value of neighboring properties, and look more favorable to lending institutions and insurance agencies. Operations with waste disposal practices that do not pose significant environmental risks may be seen as more valuable. Finally, implementing



practices that reduce, recycle, or reuse waste products can decrease costs that are associated with waste disposal or cleanup, save valuable space in local landfills, and reduce costs to wastewater treatment plants.

## Summary of Best Management Practices

### Reduce, Reuse, and Recycle

- Reduce the amount of materials purchased (i.e. paints, solvents, oils, pesticides, fertilizers, etc.). If adequate storage facilities do not exist on the farm, only purchase the amount of materials immediately needed. This will decrease the amount of materials requiring disposal.
- Reuse as many materials as possible. Materials such as: tires, jugs, barrels can be cleaned and repurposed throughout the farmstead/neighborhood.
- If materials cannot be reused, recycling is the next best option. Many of the waste materials produced on the farm can be collected and recycled by private or public programs.



- Proper Waste Disposal
- Do not dispose of waste materials in a farm dump, and eliminate any existing dumps.
- Do not burn waste materials in burn barrels or piles.
- Utilize special waste facilities to dispose of hazardous wastes.
- Consult with product providers such as agrichemical and veterinary representatives about disposal practices for their products.

## Summary of Regulations

### Local Ordinances

Check your local regulations as they could vary from State and Federal Regulations.

Contact Local Recycling Coordinator or Solid Waste Manager for information regarding waste disposal and recycling programs.

### State Regulations

[NYSDEC Guidelines](#)

[NYS Open Burning Regulations](#)

[Agricultural Exemptions for Open Burning:](#)

### Federal Regulations

[Resource Conservation and Recovery Act](#)

[Federal Insecticide, Fungicide, and Rodenticide Act \(FIFRA\)](#)

[Clean Air Act](#)

[Clean Water Act](#)



## Background Information for Worksheet Questions

### *How are dead animals disposed of?*

Disposing of dead animals is a necessary practice on all livestock and poultry operations. When the need arises, the best option is to contact an animal rendering company within 48 hours of the animal's death. Removing the carcass from the farm eliminates any chance of surface or groundwater contamination. Unfortunately, farm pickup of dead animals can be costly and is not available in many areas of the state. Proper composting of carcasses can be a good alternative. If constructed properly, compost piles are virtually maintenance free and have a very low risk of polluting surface and groundwater resources. Carcasses should be placed on a 2 ft. bed of bulky, absorbing organic material containing some sizeable pieces 4-6 inches long. Utility and municipal wood chips work well. A bulky bed allows for aeration as air enters the bottom of a pile and moves up through it as the composting process begins. Cover carcasses with dry, high-carbon material such as old silage, sawdust, or dry stall bedding. Ensure at least 2 ft. of organic matter encase the carcasses. Let the pile sit for 4-6 months then check to see if the carcasses are fully degraded.

## Background Information for Worksheet Questions

Burying the animal carcasses is a poorer alternative to composting and rendering. Burial sites should be located in soils that are moderately well drained or well drained, at least 6 feet deep and more than 200 feet from any surface water source, spring or well. Burial of large numbers of carcasses may not be the best way to assimilate the animals safely back into the environment. In the case of catastrophic mortalities, consult directly with state agricultural and health authorities. Decomposition on the ground surface is not an acceptable means of dead animal disposal. Leaving carcasses outside can attract disease spreading scavengers and greatly increases the potential for water and air pollution.

For more Information:

[Cornell Waste Management Institute](#)

[NRCS Animal Mortality Facility \(316\) Standard](#)

[NRCS Composting Facility \(317\) Standard](#)

[NYSCHAP: Large Animal Mortality Disposal](#)

[Cornell Waste Management Institute: Natural Rendering](#)



***Where is the location of the mortality management area in relation to waterbodies, floodplains, groundwater resources, and neighbors?***

The location of the mortality management area is very important because it can affect the potential of contamination of ground and surface water resources. It is important to locate these areas more than 200 feet from surface waterbodies, springs, and wells, and away from designated flood plain areas. When choosing a location it is also important to keep in mind its proximity to neighboring landowners. If the management area is located too close to adjacent landowners concerns over air quality, scavengers, and aesthetics may arise.

***Is there clean water exclusion from the management area?***

Excluding clean water from the mortality management area can greatly reduce or eliminate the potential for water pollution and other problems. When runoff flows over the ground and is allowed to infiltrate the mortality management area, the runoff can pick up and carry contaminants to surface or ground water supplies. If the farm currently has no exclusion practices in place, it can be very beneficial to install some form of clean water exclusion (diversions, berms, swales, etc.).

***If composting mortalities, is leachate produced?***

If leachate is being produced, this usually indicates that there are insufficient quantities of absorbent material underneath the carcasses. It is recommended that 18-24" of bulky absorbent yet porous material be placed on the bottom of the pile, underneath the carcasses. If leaching occurs, odors and fly infestations may develop. Vermin and scavengers will also be attracted. It is extremely important to make sure that the leachate is not allowed to visible pool on the ground. Additional runoff (i.e. stormwater runoff) that mixes with the leachate increases the risk of contamination. Immediately cover any leachate from a mortality composting pile with dry absorbing organic material such as sawdust. It is important to consider best management practices (i.e. clean water exclusion, runoff collection and treatment) that help to eliminate or exclude runoff from the composting site during the planning process. Proper composting should produce no leachate, see below to identify where some improvements may be made to the management area.

## Background Information for Worksheet Questions

### *Are there odors or visual concerns from the composting site?*

If odor or visual concerns exist at the composting site, further investigation is needed to determine the cause and mitigation method.

### *If yes, is there at least 2 ft. of clearance between dead animals?*

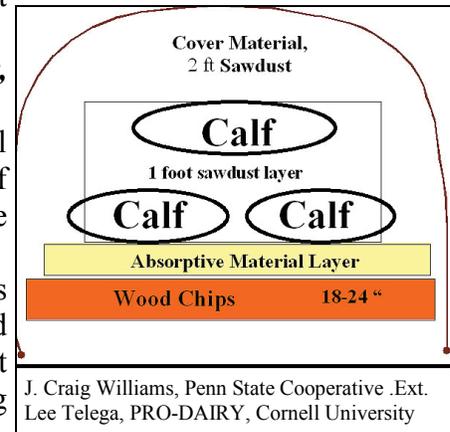
If there is not at least 2 feet of clearance between and around dead animals, this may be one of the causes of odor or visual concerns. Placing too many animals in a composting site can create odor or leachate issues. Since the mortality is supplying a high amount of Nitrogen it is important that the other compost materials have a high C:N ratio.

### *Are proper materials (high carbon, old silage, dry sawdust, or dry stall bedding) used in adequate amounts?*

The base material must be constructed of absorptive material with large enough particles to withstand the weight of the carcasses. This is essential as a chunky base allows for sufficient oxygen flow through the pile.

If proper materials are not used in adequate amounts this can result in odor or leachate issues. Animals should be covered with 2 feet of material to protect against precipitation or leaching, insulate the composting process to retain heat, and to discourage scavengers.

If a minimum of 2 feet of material is not present, more material should be added.



### *Is there a shop drain?*

If a shop drain does exist, it is important to note what has the potential to go into the drain, where it outlets, and what type of treatment or containment system may be in place. Depending on these factors, pollutants that enter the drain could potentially contaminate ground or surface water resources. If possible, it is recommended that all shop drains be plugged and their use discontinued eliminating the associated risks. A shop with no drain may need an area where mud, snow, and manure can be washed off equipment and drained into a vegetated treatment area.

### *What is done with waste lubricants?*

Dealing with waste lubricants on the farm is an important concern as they can accumulate quickly. Waste lubricants should not be stored indefinitely on the farm. If they are allowed to accumulate, the risk of leakage and contamination greatly increases. The best method of disposal is to recycle lubricants off the farm, eliminating any chance of surface or groundwater contamination. This method also helps to create a cleaner farmstead by removing empty barrels and jugs. The spent products should be properly stored in a protected area on an impervious surface with secondary containment, to protect against accidental leaks or spills until recycled off of the farm. Products may be returned in limited quantities to the point of purchase or an authorized representative. Another acceptable method is to store the products in a protected area until they can be reused properly on the farm. Along with lubricating a variety of on farm mechanisms, some farms utilize waste oil furnaces as a heating source. Waste oil should only be burned in stoves designed for such fuels. If no other means of disposal is achievable, the landowner should contact the local County Recycling Coordinator or Solid Waste Manager for more information regarding proper disposal techniques.

For More Information:

[NYSDEC Used Oil Regulations](#)

## Background Information for Worksheet Questions

### ***How are unwanted or banned pesticides disposed of?***

Many pesticides are classified as hazardous waste and should not be disposed of along with normal household or farmstead trash. Under no circumstances should unwanted or banned pesticides be disposed of by dumping them into drains, ditches, etc. Labels found on pesticide containers are required to contain information regarding proper disposal procedures and should be followed accordingly. To avoid having to store excess pesticide chemicals, purchase only necessary amounts. If absolutely necessary, store pesticides in original containers with legible labels and in a locked cabinet and/or building. Leftover pesticides can also be returned to the manufacturer or distributor.

For more information:

[EPA Pesticides and Toxics Management](#)

[NYS DEC Agriculture and Farming](#)

[Clean Sweep NY](#)

Contact your local county recycling coordinator or solid waste manager

### ***How are plastic containers from oil products handled?***

Ideally, plastic containers for oil and oil-based products should be recycled, taken to a licensed landfill or municipal incinerator after all of the product is used. This approach removes the waste from the farm, eliminates the potential for contamination, and improves the aesthetics of the farmstead. A less desirable method of disposal is to mix the containers with regular trash and send them to a municipal landfill. While this removes the waste from the farm, municipal landfills may not be able to handle oil products and the containers will accumulate in landfills, taking up valuable space. Empty containers should not be disposed of on the farm. Not only is this method unsightly, it also greatly increases the chances of pollution. The county recycling coordinator or solid waste manager should be contacted for more information.

### ***What is done with old lead acid batteries?***

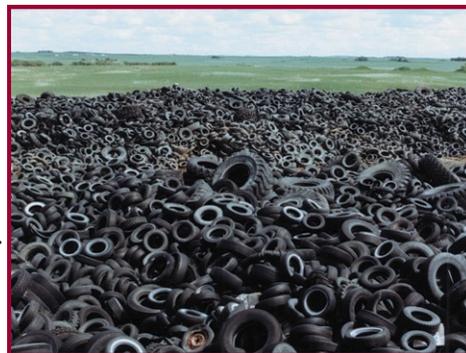
Old or spent lead acid batteries should be exchanged when replacement batteries are purchased. Most any retailers and scrap dealers will collect used batteries for recycling. If the old battery cannot be exchanged at the time of purchase, the buyer will be charged a return incentive fee that will be refunded when the old battery is turned in (core credit). Battery acid is extremely toxic and dangerous to human and animals. Lead acid batteries should not be allowed to accumulate on the farm as this can lead to corrosion and acid leaks. In addition to lead batteries, other types of batteries (AA, AAA, C, D, etc.) can also be recycled at certain electronic stores.

For more information:

[EPA Common Wastes & Materials](#)

### ***What is done with old farm tires?***

There are many uses for old tires on a farm. They can be cut and used to hold plastic over bunk silos, used as mats on barn floors, or even used as planters in a farm garden. If there are no uses for the old tires on the farm, they can be taken to a recycling depot, disposed of at a licensed landfill or exchanged when new tires are purchased. Tires should not be disposed of or stockpiled on the farm. They can create a fire hazard, as well as, a breeding ground for disease carrying pests.



## Background Information for Worksheet Questions

### *What is done with used ag plastics?*

Agricultural plastics, such as: silage bags, bale wrap, greenhouse covers, haylage covers, row covers, and mulch film, are a very common type of waste found on the farm. If an agricultural plastic recycling program is readily available in the area, the plastic should be cleaned, baled, and recycled. This removes the waste from the farm, creating a cleaner, more aesthetically pleasing farmstead. It also prevents large amounts of plastic from being put into a landfill. If no recycling program exists, it is acceptable to take the plastic to a licensed landfill to be disposed. However, it is not an acceptable practice to dump or burn waste plastic on the farm. This creates unsanitary conditions and, if burned, toxic fumes can be released into the air.

For more information:

[Cornell Waste Management Institute](#)  
[Recycling Agricultural Plastics Program](#)



### *Are products such as veterinary/medical waste, fertilizer bags, paints, and solvents a problem on the farm?*

If a problem does exist with veterinary/medical waste, fertilizer bags, paints, and solvents the farm should follow proper disposal techniques to reduce potential contamination. Medical waste (i.e. needles, syringes) should be placed in a sealed plastic bottle before discarding. Empty medicine bottles should be placed in the trash along with fertilizer bags. Any unwanted latex paint should be dried completely and placed in a plastic lined box before being discarded with household trash. Waste oil-based paints should be taken to a local household hazardous waste collection. These types of wastes should not be dumped down drains or disposed of in manure storage areas. This practice could result in the deposition of hazardous wastes on fields or in water supplies.

For more information:

[NYS DEC Paint Disposal](#)

### *Is there a farm dump or an historic farm dump?*

It was once a very common practice for farms to have a dumping area to dispose of waste. However, in more recent times, farm dumps have been phased out of use. If an active or historic dump exists on the farm it is important to note its location, if it is still being used, and what was/is being disposed of there. Farm dumps can be a source of ground or surface water contamination and should be eliminated from the farm. In addition to an environmental concern, dumps can also



be an economic concern for the farm from a liability standpoint. In all cases, dumps should be eliminated and historical dumping areas should be cleaned and inspected for signs of contamination and remediated when necessary.

## Background Information for Worksheet Questions

### *Is open burning practiced on the farm?*

In accordance with the New York State DEC regulations, open burning of household trash in burn barrels or piles is illegal. According to the NYSDEC, “organic agricultural wastes may be burned on-site where they are grown or generated including brush and wood produced by clearing fields and other activities. The fire must be located on contiguous agricultural land larger than 5 acres, and the material capable of being fully burned within 24 hours.” Open burning of trash and other non-organic agricultural waste releases dangerous chemical compounds including arsenic, carbon monoxide, benzene, formaldehyde, lead, and other toxins and carcinogens. Poor air quality contributes to serious acute and chronic health conditions, including childhood asthma and lung cancer. Open burning is the leading cause of wildfires in New York. If open burning is a common practice for waste disposal on the farm, other alternatives such as recycling, composting, and utilizing landfills should be considered.



For more information:

[NYSDEC Questions and Answers Regarding Open Burning](#)

[NYSDEC Open Burning Regulations](#)

[NYSDEC Public Service Announcement](#)

[EPA Open Burning and Environmental Alternatives](#)

## SUMMARY

AEM Tier 2 Assessments document environmental stewardship and establish benchmark conditions on the farm. They also identify resource concerns and areas of opportunity. The AEM Tier 2 worksheets also help to further establish baseline data that can be used to prioritize issues for Tier 3 planning.

Tier 2 Assessments should be completed on-site with the farmer. When the initial assessment is completed, appropriate feedback in the form of an AEM Tier 2 Worksheet Summary should be provided to the farmer. The summary should include an overall level of concern for the worksheet, explanation of the overall ranking, a list and description of items of greatest concern, as well as, documentation of what is being done well and what areas need improvement. After the evaluation is complete, the farm should be given a ranking which will determine their priority to advance to the AEM Tier 3 planning phase. Appropriate ranking categories that could be used are: High, Medium, or Low Priority. A ranking procedure that has been approved by your local AEM Team should be used to make the ranking determinations.

