

Practice: 316 - Animal Mortality Facility

Scenario # 1 Static pile, Earthen pad

Scenario Description: Actual Scenario # 6

New York

An impervious earthen pad is installed to compost large animal mortalities (dairy cow) in a static windrow and single pile. Additional carbon based bulking material is added to facilitate aeration and provide a proper C:N ratio. Piles are turned at least once to achieve another heat cycle prior to land application. Access is infrequent. Vegetation is required for runoff treatment. Resource concerns related to water quality degradation due to excessive nutrients, organics, and pathogens being transported to surface and ground water resources are addressed. Air quality impacts related to odors are reduced.

Associated Practices: Access Road (560), Composting Facility (317), Critical Area Planting (342), Fence (382), Heavy Use Area Protection (561), Nutrient Management (590), Diversion (362), Roofs and Covers (367), Structure for Water Control (378), Subsurface Drain (606), Underground Outlet (620), and Vegetative Treatment Area (635).

Before Practice Situation:

An agricultural operation currently deals with animal mortality in a manner that results in non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. The improper management of the operation results in odors and spread pathogens from incomplete composting, incineration, or interaction with predators. No plan is in place for both normal and catastrophic mortality events.

After Practice Situation:

A compacted earthen surface 50' x 50' is constructed. The site can handle mortality for a 100 cow dairy with heifers and calves. On site soils can be re-compacted to meet required imperviousness. Sufficient area for processing equipment access is included. The site is located out of drainage areas. Off-site water is diverted and any runoff is spread out into a grassed area or vegetated treatment area. Site preparation includes removal of top 1' and re-compacted. An animal mortality plan is formulated for normal and catastrophic mortality events to prevent non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. Proper management results in little to no odors and protection from predators to minimize pathogen survival and spreading. The selected method for carcass treatment and disposal meets or is permitted by federal, state, and local laws, rules, and regulations.

Scenario Feature Measure:

Pad Area

Scenario Typical Size:	2500	Square Foot	Tot Unit Cost	\$0.88
-------------------------------	------	-------------	---------------	--------

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Earthfill, Roller Compacted	150	Cubic yard	\$4.60	\$690.00
Equip./Install.	Excavation, Common Earth, side	150	Cubic yard	\$2.48	\$372.00
Mobilization	Mobilization, medium equipment	4	Each	\$282.78	\$1,131.12

Payment types:				Total Cost:	\$2,193.12
	<u>PayType</u>	<u>Unit Payment</u>		<u>PayType</u>	<u>Unit Payment</u>
	EQIP	\$0.66		EQIP-HU	\$0.79
	WHIP	\$0.00		WHIP-HU	\$0.00

Practice: 316 - Animal Mortality Facility

Scenario # 2 Static Pile, Gravel Pad

New York

Scenario Description: Actual Scenario # 7

A gravel pad installed on a large dairy (1,000 cows plus heifers) or beef operation with an average daily mortality of 175 lbs/day. The area is sized to compost animal mortality as a static pile or windrow with equipment around materials. Sufficient carbon based bulking material is added to allow natural aeration and a proper C:N ratio. The piles are turned at least once to achieve another heat cycle prior to final disposal (land application). The site is located out of drainage areas. Off-site water is diverted and any runoff spread to a grassed area or vegetated treatment area as per regulations. Resource concerns related to water quality degradation due to excessive nutrients, organics, and pathogens being transported to surface and ground water resources are addressed. Air quality impacts related to odors are reduced.

Associated Practices: Access Road (560), Composting Facility (317), Critical Area Planting (342), Fence (382), Heavy Use Area Protection (561), Nutrient Management (590), Roofs and Covers (367), Structure for Water Control (378), Subsurface Drain (606), Underground Outlet (620), and Vegetative Treatment Area (635).

Before Practice Situation:

An agricultural operation currently deals with animal mortality in a manner that results in non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. The improper management of the operation results in odors and spread pathogens from incomplete composting, incineration, or interaction with predators. No plan is in place for both normal and catastrophic mortality events.

After Practice Situation:

A 60' x 95' gravel surface is constructed to process animal mortality. 8" thick compacted gravel is installed. The typical layout is 18' wide piles with an 8' wide access area around each pile or windrow. Site preparation includes topsoil removal, minimal regrading and compaction, installing geotextile and then gravel. An animal mortality plan is formulated for normal and catastrophic mortality events to prevent non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. Proper management results in little to no odors and protection from predators to minimize pathogen survival and spreading. The selected method for carcass treatment and disposal meets or is permitted by federal, state, and local laws, rules, and regulations.

Scenario Feature Measure:

Pad Area

Scenario Typical Size:	5700	Square Foot	Tot Unit Cost	\$1.39
-------------------------------	------	-------------	---------------	--------

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Gravel, Graded	140	Cubic yard	\$30.22	\$4,230.80
Equip./Install.	Earthfill, Roller Compacted	140	Cubic yard	\$4.60	\$644.00
Equip./Install.	Excavation, Common Earth, side	140	Cubic yard	\$2.48	\$347.20
Equip./Install.	Geotextile, woven	633	Square Yard	\$2.48	\$1,569.84
Mobilization	Mobilization, medium equipment	4	Each	\$282.78	\$1,131.12

Total Cost: \$7,922.96

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	\$1.04	EQIP-HU	\$1.25
WHIP	\$0.00	WHIP-HU	\$0.00

Practice: 316 - Animal Mortality Facility

Scenario # 3 Static pile, Concrete Pad

Scenario Description: Actual Scenario # 8

New York

A concrete pad is installed over permeable soils, karst topography, frequently accessed sites, or sites with regulatory requirements to compost large animal mortalities (1000 cows plus heifers) or beef animal mortality with an average daily mortality of 175 lbs per day. The area is sized to compost animal mortality as a static pile or windrow with equipment around materials. Sufficient carbon based bulking material is added to allow natural aeration and a proper C:N ratio. The piles are typically turned at least once to achieve another heat cycle prior to final disposal (land application). The site is located out of drainage areas. Off-site water is diverted and any runoff spread onto a grassed area or vegetated treatment area as per regulations. Resource concerns related to water quality degradation due to excessive nutrients, organics, and pathogens being transported to surface and ground water resources are addressed. Air quality impacts related to odors are reduced.

Associated Practices: Access Road (560), Composting Facility (317), Critical Area Planting (342), Fence (382), Heavy Use Area Protection (561), Nutrient Management (590), Roofs and Covers (367), Structure for Water Control (378), Subsurface Drain (606), Underground Outlet (620), and Vegetative Treatment Area (635).

Before Practice Situation:

An agricultural operation currently deals with animal mortality in a manner that results in non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. The improper management of the operation results in odors and spread pathogens from incomplete composting, incineration, or interaction with predators. No plan is in place for both normal and catastrophic mortality events.

After Practice Situation:

A 60' x 95' concrete surface is constructed to process animal mortality. The concrete is installed 6" thick with light reinforcement on 6" of gravel. The typical layout is 18' wide piles with an 8' wide access area around each pile or windrow. Site preparation includes topsoil removal, minimal regrading and compaction, installing gravel or sand subbase and then concrete. An animal mortality plan is formulated for normal and catastrophic mortality events to prevent non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. Proper management results in little to no odors and protection from predators to minimize pathogen survival and spreading. The selected method for carcass treatment and disposal meets or is permitted by federal, state, and local laws, rules, and regulations.

Scenario Feature Measure:

Pad Area

Scenario Typical Size:	5700	Square Foot	Tot Unit Cost	\$5.04
-------------------------------	------	-------------	---------------	--------

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Gravel, Graded	105.5	Cubic yard	\$30.22	\$3,188.21
Equip./Install.	Earthfill, Roller Compacted	105.5	Cubic yard	\$4.60	\$485.30
Equip./Install.	Excavation, Common Earth, side	220	Cubic yard	\$2.48	\$545.60
Equip./Install.	Concrete, CIP, slab on grade,	105.5	Cubic yard	\$221.81	\$23,400.96
Mobilization	Mobilization, medium equipment	4	Each	\$282.78	\$1,131.12

Payment types:

Total Cost: \$28,751.19

PayType	Unit Payment	PayType	Unit Payment
EQIP	\$3.78	EQIP-HU	\$4.54
WHIP	\$0.00	WHIP-HU	\$0.00