

Practice: 316 - Animal Mortality Facility

Scenario: #51 - Forced Air Composting with mortality preprocessing Unit for Sow-Finisher Animal Size

Scenario Description: This scenario consists of installing a manufactured Forced Air Composting with mortality preprocessing Unit for sow/hog finisher sized animal designed to handle up to 900 lbs of average daily sow/finisher mortality. The unit consist of a concrete slab with cut in forced aeration tubes, a mortality shredding/grinding machine capable of handling larger animals, area for storage of 2nd stage compost and composting material, interior concrete wall to aid in handling the compost, and a roof over the entire system. The unit will be certified by a PE to meet state requirements. After determining average daily mortality in lbs, select the size unit needed from manufacturer supplied sizing table to determine square footage of facility needed. This typical design assumed 90 days of storage needed. Payment made per unit square footage size obtained from manufacturers' product literature. This option is considered advanced mortality treatment and will requires a smaller building footprint (75-50% less) than a roofed static compost pile with concrete floor and bins. Forced aeration compost facilities will also typically have reduced odor and process mortality in less time than static bin composting. The purpose of the practice is to address resource concerns related to water quality degradation due to excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. Air quality impacts due to odors will also be addressed. Potential Associated Practices: Heavy Use Area Protection (561), Fence (382), Critical Area Planting (342), Access Road (560), Waste Storage Facility (313), Nutrient Management (590), Roofs and Covers (367), Critical Area Planting (342).

Before Situation: Animal mortality is done in a manner that results in non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. Improper operation results in odors and spread of pathogens from incomplete composting, incineration, or interaction with predators. No plan was formulated for both normal and catastrophic mortality events.

After Situation: Animal mortality is being done in a manner that prevents non-point source pollution of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources. Proper operation results in little to no odors and protection from predators to minimize pathogen survival or spreading. An overall plan covers normal and catastrophic mortality events. Selected method for carcass treatment and disposal meet or are permitted by federal, state, and local laws, rules, regulation.

Scenario Feature Measure: Square Feet of roof covered forced air facility

Scenario Unit: Square Feet

Scenario Typical Size: 3510

Total Scenario Cost: \$303,242.94

Scenario Cost/Unit: \$86.39

Cost Details

| Component Name | Id | Description | Unit | Cost | Qty | Total |
|----------------|----|-------------|------|------|-----|-------|
|----------------|----|-------------|------|------|-----|-------|

Materials

| | | | | | | |
|--|------|---|-------------|---------|------|--------------|
| Forced Air Composting with Mortality Preprocessing – Sow/finisher Unit | 2772 | This Sow/Finisher force air with mortality preprocessing unit includes a preprocessing mortality shredder grinder capable of processing hog carcasses, a roof over the composting area, and a concrete pad with forced air bins and secondary storage area. The facility can treat from 300 to 1000 lbs mortality daily with the square foot size of the facility dependent on the lbs of mortality and the number of days required secondary storage (see the sizing table). | Square Feet | \$86.39 | 3510 | \$303,242.94 |
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