

Practice: 318 - Short Term Storage of Animal Waste and Byproducts

Scenario: #1 - Poly Cover, Earthen Pad

Scenario Description: A compacted earthen pad is constructed to store wastes on a short-term basis between collection and utilization as part of an agricultural waste management system. Site near or at top of hill, out of drainage pattern. Pile to be covered after each time manure is delivered, unless VTA below site, until it is full and then final cover added for temporary storage period. If pile is completed in one day, VTA below site not needed. Example would be a poultry house cleanout. This practice will address soil and water quality by reducing the pollution potential for surface water and groundwater quality degradation. Potential Associated Practices: Nutrient Management (590), Waste Recycling (633), Vegetated Treatment Area (635)

Before Situation: Operator presently has a confined animal feeding operation and daily manure spreading operations are not possible due to weather. Manure and other agricultural waste by-products are not being managed in an environmentally safe manner. The wastes are either accumulating at the source, or are being stockpiled in environmentally vulnerable areas and not properly managed. This situation poses an environmental threat of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources.

After Situation: Using a compacted earthen pad with a cover provides an environmentally safe measure for temporarily managing manure and other agricultural waste by-products. This facility provides the landowner a means of storing waste until it can be utilized in a proper manner in accordance with a nutrient management plan. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Typical design: volume of material temporarily stored 12,576 ft3, pad area 6,000 ft2 (60' X 100'); 4' width around edge of manure stack to properly anchor and cover the manure; footprint of manure pile: 52' X 92", 6' manure stack height on 4:1 slopes; cover is a 6 mil poly film; 15" x 1/2" dia auger anchors on 2' centers.

Scenario Feature Measure: Volume of stored manure solids

Scenario Unit: Cubic Foot

Scenario Typical Size: 12576

Total Scenario Cost: \$2,438.81

Scenario Cost/Unit: \$0.19

Cost Details

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

Equipment Installation

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|-----------------------------|-----|--|------------|---------|-----|----------|
| Dozer, 80 HP | 929 | Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included. | Hour | \$73.26 | 4 | \$293.02 |
| Earthfill, Roller Compacted | 49 | Earthfill, roller or machine compacted, includes equipment and labor | Cubic Yard | \$4.48 | 120 | \$537.14 |

Labor

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|----------------------------|-----|--|------|---------|---|----------|
| Equipment Operators, Heavy | 233 | Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons. | Hour | \$30.82 | 4 | \$123.29 |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | \$22.19 | 6 | \$133.16 |
| Supervisor or Manager | 234 | Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc. | Hour | \$44.78 | 4 | \$179.11 |

Materials

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|-----------------------------|------|--|-------------|--------|------|----------|
| Anchor, earthen, auger, 15" | 2571 | Very Low disturbance, galvanized or aluminum alloy earthen anchors (set of 6) with holding power of 500 pounds or less in normal soil. Includes materials and shipping only. | Each | \$5.75 | 64 | \$368.11 |
| Poly film, 6 mil. | 245 | 6 mil, polyethylene, black | Square Foot | \$0.08 | 6600 | \$521.58 |

Mobilization

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|--------------------------------|------|---|------|----------|---|----------|
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | \$283.39 | 1 | \$283.39 |
|--------------------------------|------|---|------|----------|---|----------|