



BERKS COUNTY CONSERVATION DISTRICT

DEP Manure Management Manual

COMPLETING A MANURE MANAGEMENT PLAN – PART 4

Manure Storage Facilities Worksheet (p.8)

- Required for farms with manure storages or stacking areas
 - Manure
 - Agricultural process wastewater
- List all manure storage facilities or areas
 - Type of storage
 - Year of construction
- List for liquid or semi-solid storages
 - Size and volume
 - Note if exposed to rainfall
- List for all storages additions to manure
 - Bedding
 - Wastewater
- Evaluation documentation
 - Problems identified
 - Practices that need to be installed to address problems
 - Date to correct problems and install practices

MANURE STORAGE FACILITIES (PROVIDE FOR EACH FACILITY)

Use Additional Sheets as Necessary

(See Page 18 of Manure Management Guidance Instructions)

Type of storage(s) (concrete or metal tank, under building structure, earthen or clay or synthetically lined pond or lagoon, exposed concrete pad, roofed solid manure stacking pad, etc.) and year(s) of construction:

Approximate size and volume (for liquid and semisolid manure) of existing manure storage(s), indicate if exposed to precipitation.

Indicate if any additional materials are added to the manure including bedding, agricultural process wastewater (water system overflow, wash water, milkhouse waste, egg wash water, etc.):

Manure storage(s) related practices that need to be installed on the farm to address identified problems (such as inadequate storage volume, leaking facilities, inadequate maintenance, runoff from a stack that directly reaches a water body, etc.) and an implementation schedule (season and year) for installation of the practices:

NOTE - If you generate or import agricultural process wastewater at the farm, this wastewater must be included in your manure management plan. On many farms, this wastewater is mixed with manure within the manure storage facility. In that case, there is no separate planning requirement for the agricultural process wastewater. If the agricultural process wastewater is not mixed with manure in the manure storage facility, you should contact the county conservation district or DEP to discuss the process for managing that wastewater.

Liquid or Semi-Solid Manure Storages



Liquid Manure Storages



Liquid or Semi-Solid Manure Storages

- MMP must assure proper and safe storage of manure and agricultural process wastewater
- Liquid or semi-solid manure storage facilities must be evaluated by the farmer monthly
 - No evidence of overtopping or leakage from the manure storage facility
 - Maintain a minimum 12-inch freeboard for all ponds at all times
 - Maintain a minimum 6-inch freeboard for all other manure storage facilities at all times
 - No visible cracking, rodent holes, tree or shrub growth on the berms or other problems with manure storage facilities that would lead to leakage
 - No visible slope failures, visible deterioration or tears of any liner, or knowledge of any local water pollution issues associated with the storage facility
- Any problems addressed in these three areas must be addressed immediately
- Written records must be maintained
 - See recordkeeping guidance and worksheet
- Liquid or semi-solid manure storage facilities built in the year 2000 and later
 - Must be designed by a licensed Pennsylvania Professional Engineer
 - Copy of engineer's certification that the storage facility was built according to the appropriate standards must be maintained

Good Storage Management

- No large vegetation
- Keep surrounding area mowed & trimmed

- Roots
 - Can decrease the integrity of storage structures
 - Can act as liquid flow paths



Good Storage Management

- Avoid animal damage
 - Keep banks mowed



“When the groundhog meets the muskrat you have trouble.”

Solid Manure Storages

- Monthly evaluation is not required for solid manure storage facilities



Manure Stockpiling and Stacking Areas

- Manure stacking at the farmstead
 - Considered solid manure storage
 - Must use an improved stacking pad or covered area
 - NRCS or conservation district specialists can provide assistance



Manure Stockpiling and Stacking Areas

**Unimproved &
Unacceptable
Farmstead
Manure Stacking**



Manure Stockpiling and Stacking Areas

- Requirements for **temporary stacking in non-farmstead areas** such as crop fields:
 - Keep at least 100 feet from sensitive areas
 - Streams, lakes, ponds, open sinkholes, drinking water wells
 - Cannot be placed within an area of concentrated water flow
 - Swale, ditch or waterway
 - Use properly constructed improved stacking pads whenever possible
 - In-field stacking areas should not be in the same location each year
 - Place at the top of a hill, where possible
 - Divert upslope water away from stacking areas
 - Place on areas with less than 8% slope.
 - Manure must be dry enough to allow for stacking at least 4 feet in height
 - Limit volume to amount that can be spread on fields nearby to the stack
 - Stack must be covered if it will be in place longer than 120 days

Manure Stockpiling and Stacking Areas

Temporary In-Field Stacking Areas



Manure Management Plan Exercise

COMPLETE MANURE STORAGE FACILITIES WORKSHEET

MANURE STORAGE FACILITIES (PROVIDE FOR EACH FACILITY)

Use Additional Sheets as Necessary

(See Page 18 of Manure Management Guidance Instructions)

Type of storage(s) (concrete or metal tank, under building structure, earthen or clay or synthetically lined pond or lagoon, exposed concrete pad, roofed solid manure stacking pad, etc.) and year(s) of construction:

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Indicate if any additional materials are added to the manure including bedding, agricultural process wastewater (water system overflow, wash water, milkhous waste, egg wash water, etc.):

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Manure Storage Facilities Worksheet (p.8)

MANURE STORAGE FACILITIES (PROVIDE FOR EACH FACILITY)

Use Additional Sheets as Necessary

(See Instructions on Pages 18)

Type of storage(s) (concrete or metal tank, under building structure, earthen or clay or synthetically lined pond or lagoon, exposed concrete pad, roofed solid manure stacking pad, etc.) and year(s) of construction:

Concrete circular tank constructed in 1998

Manure stacking pad constructed in 2005

Approximate size and volume (for liquid and semisolid manure) of existing manure storage(s), indicate if exposed to precipitation.

Concrete Tank 92' diameter, 11' deep (excluding freeboard of 6 inches) exposed to precipitation, 550,000 gallons capacity

Stacking pad 50' by 60'

Indicate if any additional materials are added to the manure including bedding, agricultural process wastewater (water system overflow, wash water, milkhouse waste, egg wash water, etc.):

Tank - 150 gallons per day of milkhouse water

Pad - straw bedding used for stacked manure

Manure storage(s) related practices that need to be installed on the farm to address identified problems (such as inadequate storage volume, leaking facilities, inadequate maintenance, runoff from a stack that directly reaches a water body, etc.) and an implementation schedule (season and year) for installation of the practices:

Tank - No problems found with tank

Pad - Need to direct clean water from pad; To be completed in Spring of 2012.

**MMP Instructions
Example (p.19)**