

LAND APPLICATION OF MANURE

A supplement to Manure Management for Environmental Protection

MANURE MANAGEMENT PLAN

WORKBOOK

**To Be Completed, Implemented and Retained
By All Farmers that Land Apply Manure**



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

October 29, 2011

**MANURE MANAGEMENT PLAN
CHECKLIST**

	Manure Management Plan Page No.	Completed or Reviewed	Not Needed
REQUIRED SECTIONS			
Contact Information Page	2		
Operation Information Page	3		
Environmentally Sensitive Areas Worksheet	4		
Winter Application Worksheet	5		
Manure Management Plan Summary	6		
Farm Map	7		
Recordkeeping	11-15		
Managing Manure Storage in Structures and Stockpiling Areas (If the farm has manure storage)	19		
Manure Storage Facilities Worksheet	8		
Manure Stockpiling and Stacking	20 of Instructions		
Managing Manure in Pastures (If the farm has pastures)			
Pasture Management Worksheet	9		
Animal Concentration Areas (If the farm has ACAs) SEE NOTE BELOW			
ACA Worksheet	9-10		
Please note that all farms with crops or ACAs must also have an Agricultural Erosion and Sediment Control Plan meeting the requirements of 25 Pa. Code Chapter 102. Additional information can be obtained from the county conservation district.			

MANURE MANAGEMENT PLAN

CONTACT INFORMATION PAGE

(See Page 3 of Manure Management Guidance Instructions)

Farm Name: _____

Name of Owner/Operator: _____

Operation Street Address: _____

City, State and Zip Code: _____

Phone number (Home/Barn): _____

(Cell): _____

Email Address: _____

Name of person preparing the Manure Management Plan (if other than owner/operator)

Preparer Name: _____

Preparer Organization: _____

Street Address: _____

City, State and Zip Code: _____

Phone Number (Business): _____

(Cell): _____

Email Address: _____

Date of Development: _____

Note that the manure management plan must be evaluated by the owner/operator annually and updated when necessary to keep the plan consistent with farm management practices.

OPERATION INFORMATION PAGE
 (See Page 4 of Manure Management Guidance Instructions)

a. Acres of the operation available for manure application: Owned _____ Rented _____

b. Animals on the operation:

Animal type	Animal # (normal production day)	Days on farm per year

c. Crop Rotations used on the Operation (use additional pages if necessary): _____

- d. **Environmentally Sensitive Areas:**
- | | | | | |
|--|-----|--------------------------|----|--------------------------|
| Private or public drinking water wells | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Streams, lakes or ponds | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Sinkholes | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Areas of concentrated flow including swales, ditches, gullies, etc. | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| For winter application, above ground inlet to agricultural drainage system | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

All farms containing environmentally sensitive areas must complete the Environmentally Sensitive Areas Worksheet on page 4 and develop a map of environmentally sensitive areas.

e. **Winter Application:** Is manure applied during the winter? Yes No
 If yes, you must complete the Winter Application Worksheet on page 5.

f. **Manure Storage Facilities:** Is manure stored in a manure storage facility (concrete tank, metal tank, under building structure, earthen, clay, or synthetic lined pond or lagoon, etc.)? Yes No
 If yes, you must complete the Manure Storage Facilities Worksheet on page 8.

g. **Solid Manure Stockpiling or Stacking:** Is manure stockpiled or stacked in outdoor areas? Yes No
 If yes, you must meet the requirements in Section 5 - Managing Manure Stockpiling/Stacking Areas on page 18 of the Instructions.

h. **Pasture Areas:** Yes No
 If yes, list acres: Owned _____ Rented _____
 All farms containing pastures must complete the Pasture Management Worksheet on page 9.

i. **Animal Concentration Areas (ACAs):** Yes No
 If yes: Owned Rented
 All farms containing ACAs must complete the ACA Worksheets on pages 9 and 10.

ENVIRONMENTALLY SENSITIVE AREAS WORKSHEET

Use Additional Sheets as Necessary

(See Pages 6 and 7 of Manure Management Guidance Instructions)

Field Identification	Environmentally Sensitive Area (stream, lake, pond, sinkhole, drinking water source, concentrated flow area)	Setback or restricted distance	Is this setback restricted area shown on the plan map (yes/no)

WINTER APPLICATION WORKSHEET
 Use Additional Sheets as Necessary
 (See Pages 8 and 9 of Manure Management Guidance Instructions)

Field Identification	Type of Manure (from the manure application charts)	Winter Season Application Rate	Percentage of Crop Residue	Type of Cover Crop (if applicable)	Field Slope Percentage

MANURE MANAGEMENT PLAN SUMMARY
 Use Additional Sheets as Necessary
 (See Pages 10-12 of Manure Management Guidance Instructions)

Crop Group and Yield (a)	Manure Group (b)	Application Season (c)	Planned Application Rate from C, NBS, PI * (d)	Incorporation Timing (e)	Commercial Fertilizer Application Rate (f)	Fields where this crop group can be used (g)

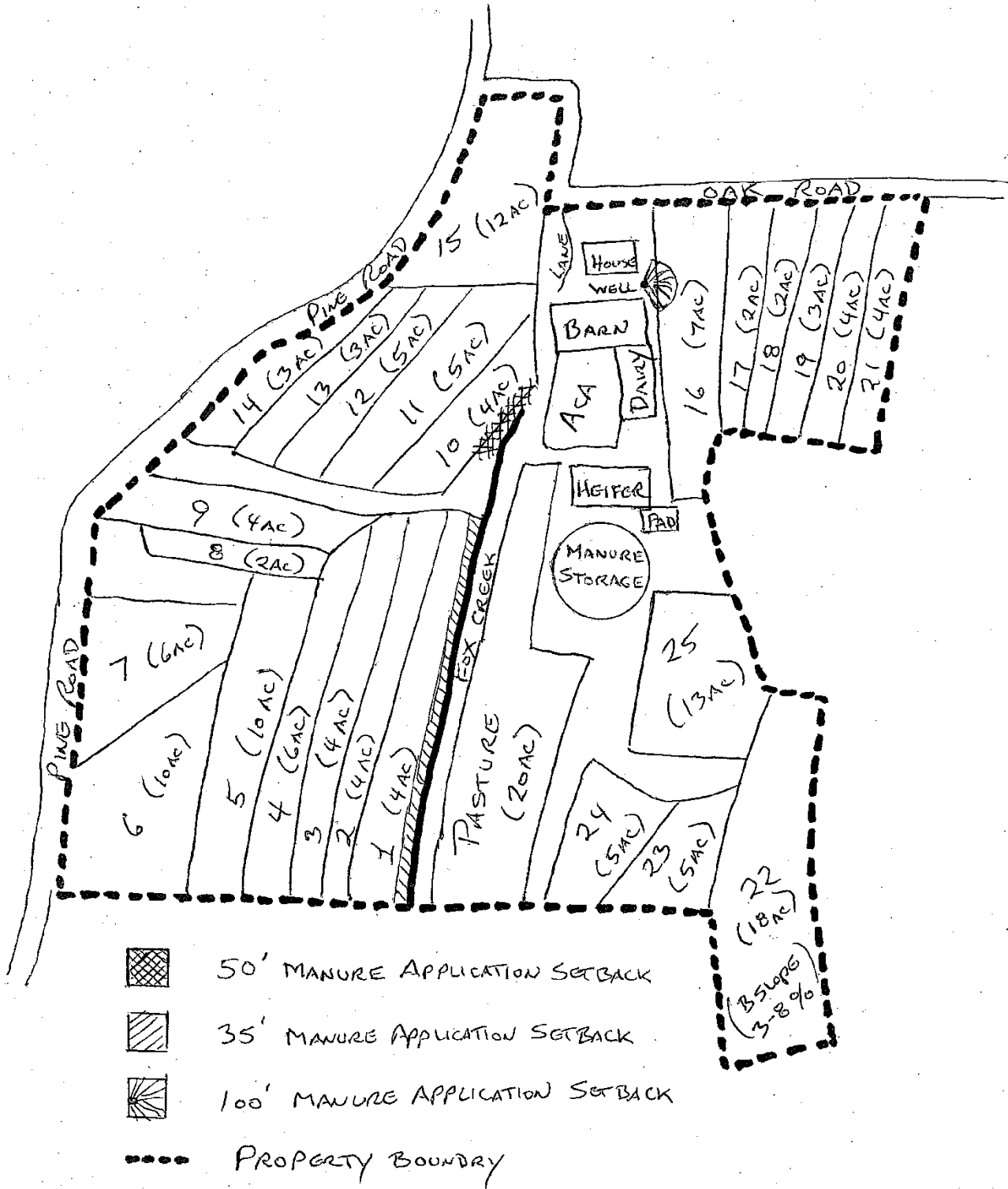
*C - The application rate was taken from the charts in Appendix 1. **Page 2 of Appendix 1 contains an explanation and example of how to use the rate charts when filling out this Manure Management Plan Summary.**

NBS - The application rate was calculated using Nutrient Balance Sheet.

PI - The application rate was calculated by a Certified Nutrient Management Planner using the Phosphorus Index.

No single application can exceed 9,000 gallons. For applications rates greater than 9,000 gallons, the application must be split into multiple applications with no evidence of pooling between applications.

SAMPLE FARM MAP



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.

PASTURE MANAGEMENT WORKSHEET
(See Page 21 of Manure Management Guidance Instructions)

All pastures on the farm must be listed in the Manure Management Plan and identified on the farm map.

Please identify your pasture management approach below:

- I have a grazing plan meeting the requirements of the Natural Resources Conservation Service Pennsylvania Technical Guide Practice Standard 528 for Prescribed Grazing.

- I am managing my pastures by maintaining dense vegetation in the pasture throughout the growing season. Dense vegetation means that the pasture is managed to minimize bare spots and to maintain an average vegetation height across the pasture during the growing season at least 3 inches high.

Grazed fields that do not have an NRCS grazing plan which are overgrazed (as defined as not meeting the management requirements described above in check box “2”) need either to be managed to restore dense vegetation or these areas will be defined as Animal Concentration Areas (“ACAs”) and will need to meet the requirements of Section 5 Animal Concentration Areas of this manual.

ANIMAL CONCENTRATION AREAS WORKSHEET
Part 1
(See Page 22 of Manure Management Guidance Instructions)

Some farms may need technical assistance in order to develop and implement BMPs on ACAs. The farmer has until October 29, 2013, to develop the BMPs and no more than 3 years from the date of developing those BMPs, to implement the BMPs. DEP believes that most farms will be able to begin implementation on a much shorter time frame but recognizes that more time may be needed for costly BMPs.

Farmers with ACAs requiring corrective actions need to immediately contact the local conservation district, NRCS, or a private consultant and must document that contact and the time frame for developing and implementing BMPs.

List date contact was made to the assisting agency/party to help in these efforts: _____

List who was contacted to assist in these efforts: _____

ANIMAL CONCENTRATION AREA WORKSHEET
Part 2
Use Additional Sheets as Necessary
(See Page 22 of Manure Management Guidance Instructions)

Location of ACA (refer to Farm Map)	List Yes if BMP has been implemented and if BMP is planned, list date for installation				
	Divert clean water around ACA	Direct polluted water to storage or vegetated treatment area	Limit access to streams through stabilized crossings and watering areas	Limit size of denuded areas	Locate area where animals congregate (feed areas, shade, etc.) away from streams

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RECORDKEEPING FORMS

(See Pages 15 through 17 of Manure Management Guidance Instructions)



MANURE APPLICATION RATE RECORD
JANUARY 1, _____ THROUGH DECEMBER 31, _____
 Use Additional Sheets as Necessary
 (See Page 15 of Manure Management Guidance Instructions)

Date	Field Identification	Acres	Manure Group	Crop Group	Application Rate	Notes

CROP YIELD RECORD
JANUARY 1, _____ THROUGH DECEMBER 31, _____
Use Additional Sheets as Necessary
(See Page 16 of Manure Management Guidance Instructions)

Field Identification	Crop Group	Date Harvested	Yield Goal	Actual Yield Harvested	Notes

MANURE TRANSFER RECORD
JANUARY 1, _____ THROUGH DECEMBER 31, _____
 Use Additional Sheets as Necessary
 (See Page 16 of Manure Management Guidance Instructions)

Date	Name of Importer/Broker	Address and Phone Number Importer/Broker	Manure Group	Amount of Manure Transferred	Crop Group and Application Rate

**MANURE STORAGE FACILITY RECORD
MONTHLY INSPECTION FORM**

Use Additional Sheets as Necessary
(See Page 17 of Manure Management Guidance Instructions)

Storage Name	Inspection Date	Manure Depth (liquid)	Depth from Surface of Manure to Freeboard (liquid)	Leak Detection System Inspections. Are there any leaks, overflows, or seepages? Describe.	Structural Integrity. Are there cracks, erosion, slope failures, liner deterioration, rodent holes, large vegetation, excessive or lush vegetation, fencing issues, loading area issues? Describe.