COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATERSHED RESTORATION AND NONPOINT SOURCE MANAGEMENT

MANURE MANAGEMENT PLAN WORKBOOK CHECKLIST

	Manure Management Plan Page No.	Completed or Reviewed	Not Needed
Section 1 – General Information			
Date of Development	2		
Contact Information	2		
Operation Information	3		
Animals Worksheet	5		
Section 2 – Mechanical Manure Application			
Environmentally Sensitive Areas Worksheet	6		
Winter Application Worksheet	7		
Manure Management Plan Summary	8		
Section 3 – Operation Map			
Operation Map	9		
Section 4 – Manure and Agricultural Process Wastewater Stor	age and Stockpili	ng/Stacking Are	eas
Agriculture Process Wastewater Worksheet	10		
Manure Storage Worksheet	11		
Section 5 – Pasture Management			
Pasture Management Worksheet	12		
Section 6 – Animal Concentration Areas			
ACA Worksheet	13		
Note: regulations require all operations with crops or ACAs to als Control Plan meeting the requirements of 25 Pa. Code Chapter 10 the county conservation district.			
Section 7 – Recordkeeping			
Recordkeeping Forms	14-17		

Email Address:

MANURE MANAGEMENT PLAN WORKBOOK Section 1 – General Information

DATE OF DEVELOPMENT

(See Workbook Instructions Page 3)

Date of Development:		
Date of Update(s):		
	pected to evaluate the manure management plan and e plan consistent with operation and manure manager CONTACT INFORMATION	
(See Workbook Instructions Page 3)	
Operation Name: Name of Operator: Name of Landowner(s): Operation Physical Address: City, State and Zip Code: Operation Mailing Address: City, State and Zip Code: Phone Number (Home/Barn): (Cell): Email Address:		
Manure Mar	nagement Plan Preparer Contact Information (if other than owner/operator)	
Preparer Name: Preparer Organization:		
Physical Address:		
City, State and Zip Code:		
Phone Number (Business): (Cell):		

OPERATION INFORMATION

(See Workbook Instructions on Page 3)

Acres available for mechanical application of manure (excluding p	astu	re):			
Owned:		Rent	ed:		
The term "Mechanical application" as used in this document means the application and mechanical means such as a manure spreader, irrigation system pitchfork. The term does not include direct application of manure by animals Concentration Areas. Pasture Areas should only be noted once, in letter c.	, hors	se-dr	awn e	quip	ment, or
Pasture Areas:	Yes		No		
If yes, list acres: Owned: Rented:					
If the operation contains pasture, then complete the Pasture Management Worksheet.					
Total acres available for manure : (b. + c.)					Acres
Animals on the operation:	Yes		No		
If animals are on the operation, complete the Animals Worksheet. Refer to App Pennsylvania's Nutrient Management Act (Act 38) for additional information.	endix	(2, A	grond	omy F	acts 54,
Environmentally Sensitive Areas:					
Private or public drinking water wells Streams, lakes, springs, or ponds Open sinkholes Areas of concentrated flow including swales, ditches, gullies, etc. For winter application, above ground inlet to agricultural drainage system If the operation contains any environmentally sensitive areas, then complete the Environmentally Sensitive Areas Worksheet and identify the environmentally sensitive areas on the Operation Map.	Yes Yes Yes Yes		No No No No		
Winter Application: Is manure applied during the winter? If yes, then complete the Winter Application Worksheet.	Yes		No		
Agricultural Process Wastewater: Is any agricultural process wastewater generated on-site? If yes, then complete the Agricultural Process Wastewater Worksheet.	Yes		No		
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, solid manure stacking pad, etc.)?	Yes		No		

If yes, then complete the Manure Storage and Stacking Worksheet.

3320-FM-BWRNSM0001 Rev. 6/2024 Workbook

j.	Solid Manure St	ockpiling or Stacki	ng:	Yes 🗌	No 🗌	
	Is manure stockpile	ed or stacked in outdoo	or areas?			
	If yes, then comple	ete the Manure Storage	e and Stacking Worksheet.			
k.	Animal Concent	tration Areas (ACAs	s):	Yes 🗌	No 🗌	
	If yes:	Owned:	Rented:			
	If the operation cor	ntains any ACAs, then	complete the ACA Worksheet.			
I.	manure will be c		e manure spreader used to apply all the recommendations in Agronomy nure application.	Yes 🗌		NA 🗌

ANIMALS WORKSHEET

Use Additional Sheets as Necessary (See Workbook Instructions on Page 4)

1. Animal Unit and Animal Equivalent Unit Calculation:

Animal Type (a)	Animal # (normal production day) (b)		Average Weight (lb.) (c)				Animal Unit (AU) (d)		Days on operation per year (e)				Animal Equivalent Unit (AEU) (f)
		×		ψ	1,000	=		×		÷	365	=	
		×		÷	1,000	II		×		÷	365	=	
		×		÷	1,000	=		×		÷	365	=	
		×		÷	1,000	=		×		÷	365	=	
		×		÷	1,000	=		×		÷	365	=	
Total													

Refer to page 14 and Agronomy Facts 54, Pennsylvania's Nutrient Management Act (Act 38): Who is Affected? found in Appendix 2 when completing the Animals Worksheet.

If the operation maintains greater than 2.00 AEU/acre and eight or more total AEUs according to Calculation 2, the operation is regulated under Pennsylvania's Nutrient Management Act (Act 38), and the operator should consult with a certified nutrient management specialist before proceeding with the remainder of the Manure Management Plan.

2.	AEU/Acre Calculation:
	Total AEUs (1f) =
	Total acres available for manure (Operation Information Page, Letter d) =
	Total AEUs ÷ Total Acres available for manure = AEUs/Acre
	AEUs ÷ Acres = AEU/Acre

MANURE MANAGEMENT PLAN WORKBOOK Section 2 – Mechanical Manure Application

ENVIRONMENTALLY SENSITIVE AREAS WORKSHEET

Use Additional Sheets as Necessary (See Workbook Instructions on Page 6)

All Environmentally Sensitive Areas listed should appear on the operation map as described in Section 3 of the Instructions.

Field Identification	Environmentally Sensitive Area (stream, lake, pond, spring, open sinkhole, drinking water source, concentrated flow area)	Setback or restricted distance for mechanically applied manure

WINTER APPLICATION WORKSHEET

Use Additional Sheets as Necessary (See Workbook Instructions Page 7)

Field Identification	Type of Manure (Liquid or Solid, Animal Type)	Winter Season Application Rate	Percentage of Crop Residue	Type of Residue or Vegetative Cover	Field Slope Percentage

MANURE MANAGEMENT PLAN SUMMARY

Use Additional Sheets as Necessary (See Workbook Instructions Page 8)

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)
Cail toot requite taken in the						Vaa 🗆 Na 🗆

Soil test results taken in the last three	ears indicate phosphorous levels (Mehlich 3-P levels) are	re less than 200 nnm Yes	□ No □
John lest results taken in the last timee	ais illulcate priospriorous levels (Merillori 5-1 Tevels) ait	16 1633 tilali 200 ppili. 1 63	

If soil samples are over three years old or indicate phosphorous levels greater than or equal to 200 ppm, then base manure application rates on the phosphorous removal charts, a NBS calculated to phosphorous removal, or the Phosphorous Index developed by an authorized planner.

- *C The application rate was taken from the charts in Appendix 1. 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 unless applied in accordance with 25 Pa. Code § 83.294(e). If any application rates are greater than 9,000 gallons, then split the application into multiple applications with no evidence of pooling between applications.

MANURE MANAGEMENT PLAN WORKBOOK Section 3 – Operation Map

INSERT OPERATION MAP

(See Workbook Instructions Page 10)

MANURE MANAGEMENT PLAN WORKBOOK Section 4 – Manure and Agricultural Process Wastewater Storage and Stockpiling/Stacking Areas

AGRICULTURAL PROCESS WASTEWATER WORKSHEET

Use Additional Sheets as Necessary (See Workbook Instructions Page 11)

1.		_	tural process wastewater generated on site (water system overflow, wash water, milkhouse g wash water, etc.)
2.	facility	listed o	ocess wastewater is directed to a manure or waste storage Yes No note the Manure Storage and Stacking Worksheet and land ling to recommendations in the Manure Management Plan
	a.		identify the manure or waste storage facility or facilities listed on the Manure Storage tacking Worksheet that receive(s) the agricultural process wastewater.
	b.	private the da	the operator should immediately contact the county conservation district, NRCS, or a consultant for management recommendations and technical assistance. Identify te, name, and affiliation of the contact in the space below. Of Contact and Affiliation of Contact
		i.	Description of management strategies for agricultural process wastewater generated on-site discussed with the county conservation district, NRCS, or private consultant.
		ii.	Planned Implementation Date:
			Implemented on Date:

MANURE STORAGE AND STACKING WORKSHEET

(Include Information for Each Manure Storage Facility and Stacking Area)
Use Additional Sheets as Necessary
(See Workbook Instructions Page 12)

1.	synth	of storage(s) and stacking area(s) (concrete or metal tank, under building structure, earthen or clay or etically lined pond or lagoon, exposed concrete pad, roofed solid manure stacking pad, etc.) and year(s) instruction:
	a.	A copy of the professional engineer certification is kept on site for all liquid Yes or semisolid manure storages constructed after January 29, 2000.
	b.	If a copy of the certification is not available, provide the date a registered professional engineer was contacted
2.		eximate size and volume of existing liquid and semisolid manure storages and/or the dimensions of an exact of the dimensions of the dimens
3.		ional materials added to the manure storage(s) or stacking area(s) including bedding, silage leachate, or agricultural process wastewater (see the Agricultural Process Wastewater Worksheet):
4.		operation maintains adequate manure storage to apply manure according to Yes No application recommendations outlined on the Manure Management Plan mary.
5.	All m	anure stacking or stockpiling areas not on the farmstead meet the following criteria: Yes 🗌 No 🗌
	a.	At least 100 feet from environmentally sensitive areas.
	b.	On properly constructed and improved stacking areas whenever possible.
	C.	On the top of a hill where possible, diverting upslope water away from the areas.
	d.	On less than 8% slope.
	e.	Manure is dry enough to stack at least four feet in height.
	f.	The volume of stacked manure is limited to the amount that can be spread on near-by fields.
	g.	Covered with a water-repellant cover if it will be in place for more than 120 days.
6.	Actio	ns or best management practices needed to address identified problems related to manure storage and/or
		ing and the planned implementation date (season and year) for each practice or action:

MANURE MANAGEMENT PLAN WORKBOOK Section 5 – Pasture Management

PASTURE MANAGEMENT WORKSHEET

(See Workbook Instructions Page 14)

List all pastures in the Manure Management Plan and identify these pastures on the operation map.

		I am implementing grazing plan meeting the requirements of the Natural Resources Conservation
	Ш	Service Pennsylvania Technical Guide Practice Standard 528 for Prescribed Grazing.
		I am managing or will manage my pastures by the date listed below to maintain at least three (3) inches of vegetation height and 70% perennial vegetative cover when animals are present on pasture.
Date I	mpleme	nted or Planned Implementation Date
2.	surface	of the above boxes are checked and animals are excluded from streams, seeps, ponds, and other e waters, and clean drinking water is available to all livestock meeting their daily water requirements, the additional information below.
Ex	clusion	Fence Length (ft) Average Width of Excluded Area (ft)
Ind	stallatio	n Date of Fence and Watering System
1113		<u> </u>

If any fields are overgrazed, then they must be reestablished in the next growing season or those fields should be managed as an Animal Concentration Area (See the Animal Concentration Areas Worksheet). Overgrazing means that the pasture is not meeting either of the pasture management guidelines identified in the above checkboxes.

MANURE MANAGEMENT PLAN WORKBOOK Section 6 – Animal Concentration Areas

ANIMAL CONCENTRATION AREAS WORKSHEET

(See Workbook Instructions Page 15)

1. Technical Assistance:

Some operations may need technical assistance to develop and implement BMPs on Animal Concentration Areas (ACAs) and/or develop a plan to minimize bare spots and maintain at least three inches of vegetation height and 70% perennial vegetative cover while animals are present on the pasture. The operator has no more than three years from the date of developing the Manure Management Plan to implement BMPs or establish pasture conditions on ACAs. DEP believes that most operations will be able to implement BMPs on a much shorter time frame but recognizes that more time may be needed for some costly BMPs.

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

2.	Describe the management strategies for any ACAs on the operation.
	List who was contacted to assist in these efforts:
	List date contact was made to the assisting agency/party to help in these efforts:
	implementing bivins.

3. BMP Implementation Schedule

Identify the date implemented in the "Date" row of the ACA block if BMP has been implemented. List the planned date for implementation in the "Date" row of the ACA block if the BMP is planned. Record N/A if the BMP does not apply. If installed, list the amount installed in the units listed in the "Amount" row of the ACA block.								
ACA Name o Location (Refer to		Divert clean water around ACA	Improve and stabilize the surface material of	Direct polluted water to storage or	Limit access to streams through stabilized	Limit size	Locate area where animals congregate (feed	
Operation Map)		(Number of Systems) the ACA (Sq. Ft)	vegetated treatment area	crossings and watering areas	areas	areas, shade, etc.) away from streams		
	Date							
	Amount							
	Date							
	Amount							
	Date							
	Amount							
	Date							
	Amount							

MANURE MANAGEMENT PLAN WORKBOOK Section 7 – Recordkeeping Forms

MANURE APPLICATION RATE RECORD JANUARY 1, ____ THROUGH DECEMBER 31, ____ Use Additional Sheets as Necessary

Use Additional Sheets as Necessary (See Workbook Instructions Page 16)

Date	Field Identification	Acres	Manure Group	Crop Group	Application Rate	Notes
10-2-22	10, 12, 13	3	Liquid Dairy	Corn Silage	6,500 gal	EXAMPLE

CROP YIELD RECORD JANUARY 1, ____ THROUGH DECEMBER 31, ____ Use Additional Sheets as Necessary (See Workbook Instructions Page 16)

Field Identification	Crop Group	Date Harvested	Yield Goal	Actual Yield Harvested	Notes
1, 3, 5, 7, 9	Corn Silage	Sep 2022	21 Tons	22 Tons	EXAMPLE

MANURE TRANSFER RECORD JANUARY 1, ____ THROUGH DECEMBER 31, ____ Use Additional Sheets as Necessary (See Workbook Instructions Page 16)

Date	Name of Importer/Broker	Address and Phone Number Importer/Broker	Manure Group	Amount of Manure Transferred	Crop Group and Application Rate
4/20	EXAMPLE Bill Jones	55 Manure Road Manure Town 717-555-4567	Solid Beef	20 Tons	Unknown

MANURE STORAGE FACILITY RECORD MONTHLY INSPECTION FORM

Use Additional Sheets as Necessary (See Workbook Instructions Page 16)

Storage Name	Inspection Date	Manure Depth (liquid)	Depth of 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.
EXAMPLE Liquid Dairy	1/1/2022	3.5 feet	7.5 feet	None	No problems observed