

Environmental Management Systems
(EMS)

Sample Record-Keeping Forms

For Animal Feeding Operations



Developed by the Heartland Water Quality Coordination Project

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Introduction

Purpose

Records are your best tool for documenting environmental stewardship progress. They are critical for determining appropriate modifications to your farm or ranch management plans to improve agronomic and environmental performance. They are absolutely essential to documenting your environmental stewardship initiatives if regulatory agencies or concerned citizens question your stewardship record.

This document is designed to summarize the record-keeping expectations of a nutrient management plan (NMP) and provide the producer with a tool to review the completeness of current record-keeping efforts. The document also provides sample record-keeping sheets that might be used to meet an identified record-keeping need.

Getting Started

1. The checklist (pages 4-11) is divided into eight sections. Review the sections that address the environmental issues most relevant to your livestock or poultry operation.
2. For each relevant topic, review the record-keeping list in the left column. Record lists are separated into a Strategic Plan/Records and Annual or Continuously Updated Records. Strategic Plan/Records refers to records that, following their initial development, may remain fairly constant with time, possibly only changing when significant changes occur in facilities, land base, or management practices. As the name suggests, Continuously Updated Records will require constant updates and maintenance for keeping this documentation current.
3. Identify which of the three right columns [Manure Management Plan (MMP), NMP, or Comprehensive Nutrient Management Plan (CNMP)] represents the type of nutrient planning you intend to implement (see next topic for discussion of MMP, NMP, and CNMP). Use the boxes beneath the appropriate heading to identify those record-keeping requirements or expectations most appropriate to your farm or ranch.
4. For record-keeping topics that you have identified as important or required but are currently not addressing, review the related sample records beginning on page 12 for templates that could be used to address a record-keeping need. These templates can also be modified to better integrate them into your existing record keeping. Electronic copies of these templates are available at <<http://www.lpes.org/>>. The numbering system of the sample record-keeping forms in this packet corresponds with the checklist entry it was designed to satisfy. For example, a form that can help fulfill the record-keeping requirement listed on the checklist in section A, entry 3b, corresponds to the record-keeping form numbered A3b. "Title." This numbering system is meant to help relate the checklists with associated sample forms available in this booklet. It has no special significance outside of this booklet and does not need to be retained in your record-keeping system if you organize your system differently.

MMP vs. NMP vs. CNMP

A producer will encounter a variety of terms to describe a plan for managing manure and other nutrient sources. These different terms all refer to a management plan that addresses the environmental, agronomic, and engineering issues associated with management of nutrients (including those in manure) for a farm with a confinement animal facility. State and federal public policy encourages (or requires in many situations) a nutrient plan to accomplish these goals.

MMP (Manure Management Plan). An MMP is generally the simplest nutrient plan. It focuses on management plans that address manure storage and land application of manure and other nutrients. This plan is often applicable to animal feeding operations (AFOs) that are not regulated but are committed to the principles of environmental stewardship. This document identifies record-keeping topics that may be appropriate for an MMP. However, the individual producer with an MMP has significant latitude in identifying appropriate record-

keeping procedures to be implemented. Furthermore, none of the states or regions of the United States shares a common definition of their expectations for an MMP.

NMP (Nutrient Management Plan). The EPA Concentrated Animal Feeding Operation (CAFO) regulations have used NMP to describe the nine minimum elements or practices required of a livestock or poultry operation that has been classified as a CAFO and required to maintain a National Pollution Discharge Elimination System (NPDES) Permit. These nine elements address issues commonly associated with nutrient management (e.g., nutrient plan, soil and manure sampling) as well as elements less commonly associated with nutrient management (e.g., mortality management and chemical disposal). The minimum expectations of an NMP have been carefully defined by federal regulations. States may choose to expand upon these expectations. This document defines the minimum record-keeping requirements of the federal regulations only.

CNMP (Comprehensive Nutrient Management Plan). The term “CNMP” is often used to refer to an all-inclusive planning procedure used to address most environmental issues associated with livestock or poultry production. USDA Natural Resources Conservation Service has adopted the CNMP as the key element of environmental planning for all AFOs and a common expectation of the cost share assistance for AFOs. A CNMP includes six planning elements: manure storage, land treatment for erosion and runoff control, cropping systems nutrient planning, animal feed management, and alternative uses of manure. Most states actively assist producers with at least four of these planning elements (manure storage, land treatment for erosion and runoff control, cropping systems nutrient planning). The two remaining elements (animal feed management and alternative uses of manure) are not as well defined among most state NRCS programs supporting CNMPs.

This document will identify those record-keeping procedures for the three levels of nutrient planning described in the preceding paragraphs. Actual expectations and requirements commonly vary among states. This publication’s recommendations should be checked against local and state expectations or requirements.

Requirements vs. Voluntary Expectations

Livestock and poultry operations that are defined as “Large CAFOs” under federal or state rules are required to implement an NMP. To develop this publication, the authors interpreted the NMP requirements of the CAFO regulations and then assembled the checklist of record-keeping expectations and sample record forms contained in the publication. Your own review of these regulations may lead to a different interpretation of record-keeping requirements. We encourage large CAFO operators to compare our interpretation of required records against the expectations of your state’s environmental quality agency that has responsibility for implementing CAFO regulations.

Some livestock and poultry operations will be classified as small or medium CAFOs, based on their size and connection to surface water. States are given greater latitude when they set the specific NMP expectations for small and medium CAFOs. The NPDES permit prepared for an individual operation should define the specific record-keeping expectations. Some, but possibly not all, record-keeping topics identified in the NMP column of the checklist are likely to be required for small and medium CAFOs.

Livestock and poultry operations not classified as a CAFO should consider nutrient planning to be a voluntary expectation that is fundamental to being a good steward of land and water resources. The MMP column in a checklist would be considered the minimum voluntary expectations for a producer committed to the principles of environmental stewardship.

Many CAFOs and unregulated AFOs may voluntarily choose to implement a CNMP. CNMPs are an integral part of NRCS conservation initiatives including cost share programs. However, implementing all aspects of a CNMP presents a significant challenge to agricultural producers. Producers planning to implement a CNMP may wish to consider this undertaking a long-term effort that will be implemented over a number of years as part of a continuing environmental improvement program.

Recognizing this challenge, most current state NRCS support focuses only on certain aspects of the CNMP (manure storage, crop nutrient planning, and land treatment or runoff and erosion control). However, for many medium and large AFOs, the greatest environmental benefits will result from those components of a CNMP related to feed management and alternative use (e.g., manure transfer to off-farm uses). Implementing a true CNMP helps assure producers that their operation has met their legal requirements as well as made strides toward achieving true environmental sustainability.

Section A. My Environmental Management System Overview.

Records Checklist	AFO MMP	NPDES NMP	CNMP ¹
Strategic Plans/Records²			
<p>1. File copy of all plan documentation relative to facility siting, engineering and design, and nutrient management, including all permits such as an NPDES permit.</p> <p>2. At a minimum, maps illustrating field boundaries and field name or identification number. Additional valuable information may include field boundaries, available crop acres, and planned setbacks or buffers. USGS topographic maps may be required for NPDES-permitted facilities. Aerial photographs are generally acceptable for most other applications.</p> <p>3. Summarize individual farm environmental plans including:</p> <p>a. Identification of performance measure(s) for judging plan success (See each copy of <i>My EMS Workbook</i>, “Work Sheet 6. Stewardship Plan for _____.”)</p> <p>b. List of all records, checklists, standard operating procedures, and emergency action plans such as most recent date reviewed (audited) by farm management or third party (e.g., permitting authority field inspector). (See <i>My EMS Workbook</i>, “Work Sheet 8. Environmental Records,” “Work Sheet 9. Standard Operating Procedures,” and “Work Sheet 10. Emergency Response Plans.”)</p> <p>c. Calendar illustrating timing of primary activities for implementing plan (See each copy of <i>My EMS Workbook</i>, “Work Sheet 6. Stewardship Plan for _____” or use Form A3c on page 12 of this packet.)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>
Annual or Continuously Updated Records³ (none)			

¹ CNMP Record Expectations. State NRCS-sponsored CNMP programs often focus on manure storage, crop nutrient management, and land treatment. These CNMP-suggested records may not be an expectation in some states.

² Strategic Plans/Records: Plans and records that are completed once and updated only if significant changes have occurred (e.g., significant expansion in herd size).

³ Annual or Continuously Updated Records: Records that require regular updates or additions to maintain their accuracy or completeness.

Section B. Animal Management, Including Feed Management.

Records Checklist	AFO MMP	NPDES NMP	CNMP ⁴
Strategic Plans/Records			
1. Environmental risk assessment of feed program for excess nutrient excretion and odor generation potential (see “Handout 5. Potential Resources for Environmental Assessments” in the <i>Educator/Coach Supplement</i> for a list of possible resources.)			<input type="checkbox"/>
2. Estimate of manure production (mass or volume) and associated nutrients (nitrogen and phosphorus that are recovered annually from animal housing or manure storage facility (This may be a part of the engineering and management plans assembled for Section A1. It is a required part of an NPDES permit and the annual reporting requirements for an NPDES permit.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Annual or Continuously Updated Records			
3. Animal Inventory Record: Summary of animal populations, purchases, sales, mortality numbers, and disposal method. (See Form B3 on page 13 of this packet.)		<input type="checkbox"/> ⁵	<input type="checkbox"/>
4. Record of all feed ingredients consumed by animals and of ingredients purchased from off-farm sources.			<input type="checkbox"/>
5. Most recent ration analysis results			<input type="checkbox"/>
6. Water System Checklist: a. Daily inspection of all water lines and animal waterers for excess spillage/leakage. (See Form B6 on page 14 of this packet.) OR b. Daily record of water meter readings with waterer/water line inspection triggered by pre-established increase in water use. (See Form B6, Option 2, on page 15 of this packet.) Using water meter readings to determine if a visual inspection is needed may not be an acceptable option. Check with the permitting authority about the acceptability of this option.		<input type="checkbox"/> ⁶	<input type="checkbox"/>

⁴ CNMP Record Expectations. State NRCS-sponsored CNMP programs often focus on manure storage, crop nutrient management, and land treatment. These CNMP-suggested records may not be an expectation within some states.

⁵ NPDES NMP requirements do not include records of animal purchases and sales.

⁶ Some state permitting authorities interpret the regulation as requiring only a “visual” inspection with no “written” record required.

Section C. Manure and Wastewater Handling and Storage.⁷

Records Checklist	AFO MMP	NPDES NMP	CNMP
Strategic Plans/Records			
1. Storage facility design summary document, including design solids accumulation volume, treatment volume, total capacity, days of storage capacity, and critical pumping levels. (This may be a part of the engineering plans or NPDES permit identified in Section A1.) 2. Standard Operating Procedures form (see Form C2 on page 16 of this packet): <ul style="list-style-type: none"> a. Storage inspection b. Equipment and/or storage maintenance c. Sediment and sludge management d. Agitation and pump-out procedures 	<input data-bbox="1166 457 1219 512" type="checkbox"/> <input data-bbox="1166 583 1219 638" type="checkbox"/>	<input data-bbox="1300 457 1354 512" type="checkbox"/> <input data-bbox="1300 583 1354 638" type="checkbox"/>	<input data-bbox="1446 457 1500 512" type="checkbox"/> <input data-bbox="1446 583 1500 638" type="checkbox"/>
Annual or Continuously Updated Records			
3. Storage inspection checklist and maintenance log: (See Form C3 on page 17 of this packet.) <ul style="list-style-type: none"> a. Level of liquid in all storage structures b. Inspection of all structures for handling manure and manure-contaminated storm water c. Inspection of all structures for diverting clean water d. Inspection of liners (compacted earth, clay, or membrane) in all storage structures e. Inspection of earthen berm and containment wall integrity f. Inspection of pumping and transfer equipment g. Log of corrective and preventative maintenance activities 4. Storage pumping log (See Form C4 on page 19 of this packet.) <ul style="list-style-type: none"> a. Date of all pumping events, including change in liquid levels, pumping rate, and pumping start and stop times b. Level of storage liquid (If already recorded on Storage Inspection Checklist, only need to record this information once.) c. All precipitation events (When precipitation only is needed, Form C4c on page 20 of this packet is an alternative to Form C4.) d. Annual estimate of manure and runoff volume from storage facility pumping log 5. Report of all manure spills to permitting authority (phone notification in 24 hours and written report in 5 days. Check with your permitting authority for possible differences in reporting times for your individual state) See page 42 for Form F2.	<input data-bbox="1166 787 1219 842" type="checkbox"/> <input data-bbox="1166 1123 1219 1178" type="checkbox"/> <input data-bbox="1166 1459 1219 1514" type="checkbox"/>	<input data-bbox="1295 787 1349 842" type="checkbox"/> <input data-bbox="1295 1123 1349 1178" type="checkbox"/> <input data-bbox="1295 1459 1349 1514" type="checkbox"/>	<input data-bbox="1437 787 1490 842" type="checkbox"/> <input data-bbox="1437 1123 1490 1178" type="checkbox"/> <input data-bbox="1437 1459 1490 1514" type="checkbox"/>

See Form F2 on page 42.

⁷ Assumes that engineering design plan has addressed (1) storage structural drawings and site plans, (2) sizing calculations for volumes generated and storage capacity, (3) seepage control and liner design, (4) manure and wastewater handling equipment and structures, and (5) construction quality assurance plan.

Section D. Land Treatment Practice.

Records Checklist	AFO MMP	NPDES NMP	CNMP
Strategic Plans/Records			
1. Map of all application sites indicating (This may be a part of the engineering plans assembled for Section A.): <ul style="list-style-type: none"> a. Areas of no manure application due to setbacks from waters of the state. b. Other setbacks or restrictions on manure application. c. Conservation practices installed or implemented for erosion or runoff control. 2. Results of individual field Phosphorus Risk Assessment and estimates of erosion. Phosphorus Index should be updated with each soil phosphorus analysis or when practices that impact erosion or runoff are changed. (See Form D2 (Option 1) on page 21 of this packet or Form D2 (Option 2) on page 22 of this packet.)	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> <input type="checkbox"/>
Annual or Continuously Updated Records			
3. Record of setbacks maintained from surface waters during land application (may be a part of nutrient application records discussed in Section E) 4. Maintenance log of conservation practice corrective and maintenance activities (See Form D4 on page 23 of this packet.)	<input type="checkbox"/> 		<input type="checkbox"/> <input type="checkbox"/>

Section E. Crop Nutrient Management Plan.

Records Checklist	AFO MMP	NPDES NMP	CNMP
Strategic Plans/Records			
1. Standard operating procedures for (See Form C2 on page 16 of this packet.): a. Soil testing. b. Manure sample collection. c. Application equipment calibration.		<input type="checkbox"/> 1a & b	<input type="checkbox"/> 1a, b, & c
Annual or Continuously Updated Records Most items should be completed for each field or management area.			
2. Field Nutrient Balance: a. Crop available manure nutrient credit b. Annual pre-season plan for field-specific nitrogen and phosphorus balance (summarizing planned crops, yields, and nutrient credits for all nutrient sources). c. Post-season summary of crops grown, actual yields, and nutrient balance (Note: For above two requirements, see Form E2b and c Part 1 (Option 1) on page 26 of this packet and E2b and c Part 1 (Option 2) on page 27 of this packet. Also see Form E2b and c Part 2 on page 28 of this packet.)		<input type="checkbox"/>	<input type="checkbox"/>
3. Application Plan for equipment operator: (See Form E3 on page 29 of this packet.) a. Annual application plan identifying location, rate, form, method, and timing for manure and fertilizer b. Post-season summary of manure and fertilizer application rate	<input type="checkbox"/> 3a only	<input type="checkbox"/>	<input type="checkbox"/>
4. Field-specific nutrient application record: a. Date, rate, method, and weather conditions (24 hours before and following application) for manure application (For the field record that applies to your system, see Forms E4a, Options 1-4, on pages 30-33 of this packet.) b. Date and rate of fertilizer application c. Irrigation water use and nitrate analysis	<input type="checkbox"/> 4a and b only	<input type="checkbox"/>	<input type="checkbox"/>
5. Testing and monitoring a. Field-specific soil test results b. Manure source specific test results (For a. and b., see Form E5a and b on page 34 of this packet or keep copies of your lab testing results.) c. In-season and post-season crop nutrient status test results (e.g., stalk nitrate tests, chlorophyll meter readings) (See Form E5c on page 35 of this packet.)	<input type="checkbox"/> 5a & b only	<input type="checkbox"/> 5a & b only	<input type="checkbox"/>
6. Application equipment records [See Form E6 (Option 1) on page 36, E6 (Option 2) on page 38, or E6 (Option 3) on page 40 of this packet.] a. Application equipment calibration results b. Application equipment checklist c. Application equipment maintenance log	<input type="checkbox"/> 6a only	<input type="checkbox"/>	<input type="checkbox"/>
7. Report of all manure spills resulting from land application to permitting authority (phone notification in 24 hours and written report in 5 days. Check with your permitting authority for possible differences in reporting times for your individual state.) See Form F2, page 42 for sample report.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> See Form F2 on page 42.

Section F. Record Keeping (General).

Records Checklist	AFO MMP	NPDES NMP	CNMP ²
Strategic Plans/Records			
1. Standard Operating Procedures (SOPs) ⁸ (See Form C2 on page 16 of this packet.) See other sections for specific SOP requirements or expectations.			
Annual or Continuously Updated Records			
See other CNMP sections for specific annual records.			
2. Report of all manure spills to permitting authority (phone notification in 24 hours and written report in 5 days) (See Form F2 on page 42 of this packet.)		<input type="checkbox"/>	<input type="checkbox"/>
3. Staff Training Record: Record of staff training on SOPs, record keeping, and emergency response plans (See “Work Sheet 7. Training Needs,” in <i>My EMS Workbook</i> or “Handout 7. Training Log” in the <i>Educator/Coach Supplement</i> .)			<input type="checkbox"/>
4. Annual NPDES report (See Form F4 on page 44 of this packet.)		<input type="checkbox"/>	<input type="checkbox"/>
5. Reports for incentive/cost share programs			<input type="checkbox"/>
6. Record of neighbor odor and nuisance complaints and of weather conditions at the time of complaint (See Form F6 on page 47 of this packet.)			<input type="checkbox"/>

⁸ Consult your land-grant university Cooperative Extension for sample SOPs for activities such as soil and manure sample collection, soil and manure lab testing methods, manure storage operating procedures, and application equipment calibration methods. Extension publications with clearly defined procedures may serve as a substitute for your own SOP.

Section G. Other Utilization Activities.

Records Checklist	AFO MMP	NPDES NMP	CNMP ⁹
Strategic Plans/Records			
1. File copy of all plan documentation related to alternative technology design, engineering, and management.		<input type="checkbox"/>	<input type="checkbox"/>
Annual or Continuously Updated Records			
2. Record of all third parties (name and address) receiving manure, including date and approximate quantity (See Form G2 on page 48 of this packet.)		<input type="checkbox"/> ¹⁰	<input type="checkbox"/>
3. Alternative technology specific record detailing inspection checklist(s), preventive and corrective maintenance log, and performance summary (See Form G3 on page 49 of this packet.)		<input type="checkbox"/> ¹¹	<input type="checkbox"/>

⁹ CNMP Record Expectations. State NRCS-sponsored CNMP programs often focus on manure storage, crop nutrient management, and land treatment. These CNMP-suggested records may not be required in some states.

¹⁰ All transfer of manure to a third party by a permitted CAFO must include providing this third-party representative with a copy of the most recent manure analysis for the manure being transferred.

¹¹ If alternative technology contributed to meeting the standards of an NPDES effluent limitation guideline, records specific to that technology may be required. Those record requirements would be identified in the NPDES permit.

Section H. Performance Review.

Records Checklist	AFO MMP	NPDES NMP	CNMP ¹²
Strategic Plans/Records (none)			
Annual or Continuously Updated Records			
<ol style="list-style-type: none"> 1. Regular (possibly annual) review of performance based on selected performance measures (see Section A2). 2. Summary of all reviews, inspections, or audits by third parties (e.g., NRCS, TSP, or regulatory agency) including date, recommendations made, and follow-up actions. 		<input type="checkbox"/> ¹³	<input type="checkbox"/> <input type="checkbox"/>

¹² CNMP Record Expectations. State NRCS-sponsored CNMP programs often focus on manure storage, crop nutrient management, and land treatment. These CNMP-suggested records may not be required in some states.

¹³ NPDES permit requires records documenting some performance measures, including results of P Index assessment and annual summary of individual field summaries such as actual yields and manure application rates, storage levels, and other performance measures. Maintaining records for five years for possible review by a regulatory inspector adequately demonstrates performance.

A3c. Calendar of Nutrient Plan Implementation Activities for _____
 Farm/Ranch.

Plan	Potential Standard Operating Procedures	Jan	Feb	Mar	Apr	May	July	June	Aug	Sept	Oct	Nov	Dec	Who is responsible?
Manure Storage	Storage inspection Manure sampling Pump-out procedures (including agitation) Sludge and settled solids mgmt: _____ _____													
Crop Nutrient Management	Individual field crop nutrient plan Manure sampling Spreader calibration/inspection Field nitrogen status check: _____ _____ _____													
	_____ _____													

B3. Animal Inventory and Mortality.¹⁴

Farm Name: _____ Location of Permanent Records: _____

Mortality Disposal Method A: _____ Mortality Disposal Method B: _____

Date	Animal Facility:				Animal Facility:				Animal Facility:				Initials
	Total Number of Animals	Number Entering Herd (Flock) ²	Number Exiting Herd (Flock) ²	Number Mortalities/- Method ²	Total Number of Animals	Number Entering Herd (Flock) ¹⁵	Number Exiting Herd (Flock) ²	Number Mortalities/- Method ²	Total Number of Animals	Number Entering Herd (Flock) ²	Number Exiting Herd (Flock) ²	Number Mortalities/- Method ¹	

¹⁴ NPDES NMP requirements do not include records of animal purchases and sales.

¹⁵ Since last report

B6. Water System Inspection: Daily Check (Option 1).

Month: _____	Location: _____		Location: _____		Location: _____		Location: _____		Initials
Day:	Water Line	Waterer	Water Line	Waterer	Water Line	Waterer	Water Line	Waterer	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
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23									
24									
25									
26									
27									
28									
29									
30									

Date	Problems Observed	Repairs Made	Initials

B6. Water System Inspection: Daily Log of Water Use (Option 2).¹⁶

Month: _____	Meter Location: _____		Meter Location: _____		Meter Location: _____		Initials
Day:	Meter Reading	Daily Use	Meter Reading	Daily Use	Meter Reading	Daily Use	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							

Date	Problems Observed	Repairs Made	Initials

¹⁶ Using water meter readings to determine if visual inspections are needed may not be an acceptable option. Check with the permitting authority.

C2. Standard Operating Procedures (SOPs) Template.

Directions: Consult the university extension in your state for soil and manure sample collection procedures and soil and manure lab testing methods. Keep each publication filed with your plan or complete the SOP below.

SOP for _____

Developed by: _____ Revised by: _____

Date: _____ Date Revised: _____

Filing Location: _____ Posting Locations: _____

Purpose: _____

Steps:

C3. Weekly Manure Storage/Lagoon Inspection Checklist and Maintenance Log.

Farm: _____ Storage/Lagoon ID: _____ Checked by: _____

Date					
Inspected by (initials):					

Critical Storage Liquid Levels
 Must pump or maximum operating level: _____ ft
 Pre-winter must pump level: _____ ft
 Stop pumping or minimum operating level: _____ ft^a
 Max sludge/solids level: _____ ft^b

a. Anaerobic lagoons only
 b. Anaerobic lagoons and runoff holding ponds only

Manure/Effluent Level Observations

Inspection Results¹

Depth remaining to sidewall low point (ft) ²										
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Is liquid level marker available and visible?										
Does sufficient freeboard exist? ³										
Other: _____										

Earthen Storage Structure

Maintenance Log

Interior liner erosion observed:	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Date	Maintenance Performed and Initials
Due to wave action?												
In vicinity of inlets?												
In vicinity of outlets?												
Due to erosion from rainfall?												
Near agitation equipment access points?												
Signs of berm damage due to:												
Burrowing animals?												
Presence of trees?												
Presence of large weeds?												
Erosion or gullies?												
Poorly established sod?												
Are there indications of:												
Damp, soft, or slumping areas on berms?												
Seepage near toe of berm?												
Seepage around pipes through the berm?												
Other: _____												
Other: _____												

- a. Check in grey box indicates concern that may require additional attention.
- b. Measured from liquid surface to lowest point on top of dam, berm, or spillway (nearest 1-ft interval).
- c. Runoff holding pond should maintain sufficient volume for freeboard and volume for runoff from 25-year, 24-hour storm.

C3. Weekly Manure Storage/Lagoon Inspection Checklist and Maintenance Log *(continued)*.

Concrete/Steel Tanks

Inspection Results¹

Maintenance Log

Date:	Inspection Results ¹										Date	Maintenance Performed and Initials
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
Signs of cracks or structural damage?												
Signs of leakage or overflow?												
Signs of wet spots around base of tank?												
Other: _____												

Dry Storage (Long-term or permanent storage)

Is clean water diverted away from stockpile?											
Is stockpile under roof or cover?											
If no, is runoff from stockpile collected?											
Other: _____											

Clean Water Diversion

Are perimeter drains plugged or blocked?											
Is roof water entering storage?											
Is field runoff entering storage?											
Are diversions/waterways maintained?											
Other: _____											

Storm Water

Is storm water drainage to storage functioning properly?											
Other: _____											

Pumping and Transfer Equipment

Security: Are gravity drains or pump power supplies locked/secure from tampering?											
Are transfer pipes/pumps functioning properly?											
Are recycle pumps/transfer pipes functioning?											
Are backflow/well protection valves in place and functioning properly?											
Other: _____											

¹Check in grey box indicates concern that may require additional attention.

C4. Monthly Storage Volume and Level Record.

Directions: To provide a record of precipitation, land application events, and liquid levels for each storage structure. At each pumping event, document it with a record with a record similar to the Irrigation Field Record in Section E.

Month: _____ Structure /Basin ID: _____ Maintained by: _____

Day	Precipitation (inches)	Land Application or Discharge to Waters of the State							Pond Liquid Level (ft)	
		Time Pumping Events		Level Pumping Events		Pump Flow Rate (gpm)	Field Used for Application	Total Volume Pumped (gallon)		Check if Discharge ¹
		Start	Stop	Start	Stop					
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

¹ This column should be checked if pump out is directed to surface waters, wetlands, ditch, or drainage connecting to surface waters. Permitting authority should be notified by phone in 24 hours. Review and follow permitting authority reporting requirements.

² Liquid level is measured from: ___ Low point at top of berm, dam, or spillway; ___ Bottom of storage
Measure to the nearest 1 ft.

Year: _____

C4c. Daily Precipitation Record (alternative to Form C4 when only precipitation is needed).

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Month Total												
Yr to Date												

Year: _____

D2. (Option 1) Phosphorus Index Record (or attach P Index Output Forms).

Field ID	Phosphorus Index Final Score				Management Changes and Year	Initials
	Yr: ____	Yr: ____	Yr: ____	Yr: ____		

D2 (Option 2). Phosphorus Index Scores for Individual Factors.

Date	Field ID	County	Soil Type	RUSLE2 or Other Erosion Estimate	Proximity to Waters of the State	Setbacks or Filter strip Width	Conser- vation Practices in Place	aintenance of Conservation Treatments		Manure Application Method and Rate	Fertilizer Application Method and Rate	Soil Test P	rop and Tillage Practice	Irrigation or Sub-surface Drainage											
								Date	Action																

D4. Conservation Practice Inspection and Maintenance Log.

Farm: _____ Checked by: _____

Date					
Inspected by (initials):					

Inspection Results¹

Maintenance Log

Inspection Issue:	Inspection Results ¹										Date	Maintenance Performed & Initials	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			

E2a. Crop Available Manure Nitrogen Instructions.

Purpose

By using this worksheet, producers can estimate a crop available nitrogen credit for a known (calibrated) manure application rate. A *Manure Use Plan* spreadsheet, available at <http://cnmp.unl.edu/cnmsoftware.html>, completes these same calculations.

Regulations

Nebraska DEQ's Title 130 requires that manure not be applied "in excess of agronomic rates for nitrogen." To comply with these regulations, producers will need to *annually* prepare a *Nitrogen Management Plan* that determines *Crop Available Manure Nitrogen*, and keep it on file for five years (for NDEQ inspection).

Steps

- Col. a: This "Option #" is used again in the *Annual Field Plan* (Form 18, Column l) to reference the selected manure application option.
- Col. b: Enter a description of manure source (e.g., lagoon, below barn pit, open lot), season of application, and timing of incorporation.
- Col. c: Enter the planned application rate. Application equipment should be calibrated to achieve approximately the desired rate.

- Col. d: Enter the manure's ammonium-N from lab analysis or, if not available, an approximate nutrient content from Reference Table R-3 (p. 77).
- Col. e: Fill in the ammonium-N availability factor based on the most applicable situation from the left box in Figure 1.
- Col. f: Calculate crop available ammonium-N (Col. c x Col. d x Col. e)
- Col. g: Enter the organic-N in the manure from lab analysis (Total N – Ammonium N). If a manure analysis is not available, see Reference Table R-3.
- Col. h: Enter the organic-N availability factor from the middle box in Figure 1.
- Col. i: Calculate the crop available organic-N (Col. f x Col. g x Col. h).
- Col. k, l, and m: Organic-N available over the next 3 years can be estimated by multiplying the appropriate availability factor in the right box of Figure 1 by the value in Col. i.

This procedure should be repeated for each manure application system (or piece of equipment), each application rate, and timing of incorporation.

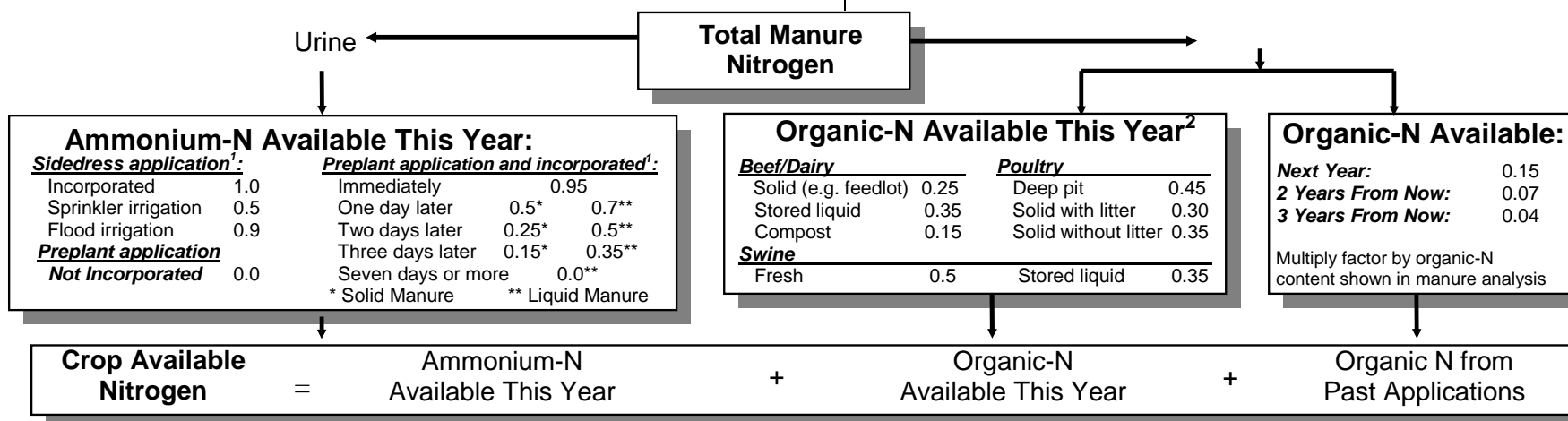


Figure 1. Availability factors for manure nitrogen. (replace with state-specific information)

¹ Complete incorporation by tillage or by a 0.50 inch or greater rainfall.

² Organic-N availability assumes spring-seeded crops such as corn and soybeans. For winter or spring manure application prior to planting small grains, multiply organic-N availability factor by 0.7. For late summer or fall manure application prior to planting small grains, use the organic N values shown in Figure 1.

E2a. Crop Available Manure Nitrogen.

Manure Application Options			Ammonium-N Available This Year			Organic-N Available This Year			j. This Year's Total N Available (f + i) (lbs/ac)	Organic-N Available:		
a. Option #	b. Manure Source, Season of Application, and Incorporation	c. Planned Application Rate	d. Ammonium-N Content ("as is" basis)	e. Available factor see Figure 1)	f. Available NH ₄ -N (c x d x e) (lbs/ac)	g. Organic-N Content ("as is" basis)	h. Available Factor (see Figure 1)	i. Available Organic-N (c x g x h) (lbs/ac)		k. Next Year (c x g x 0.15) (lbs/ac)	l. 2 Years from Now (c x g x 0.07) (lbs/ac)	m. 3 Years from Now (c x g x 0.04) (lbs/ac)
Ex.	Feedlot manure surface applied, incorporate in 24 hrs	18 <input checked="" type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	4 <input checked="" type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in	0.5	36	16 <input checked="" type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in	0.25	72	108	36	18	9
1		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						
2		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						
3		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						
4		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						
5		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						
6		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						
7		<input type="checkbox"/> tons/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in						

E2b and c Part 1. (Option 1) Annual Pre-Season Plan and Post-Season Summary for Nitrogen (multi-year record for a single field).

Directions: Complete the line for the next year before applying any manure.

Field or Management Area: _____

Method for Measuring Crop Yield: _____

a. Year ¹	d. Expected Yield- /Actual Yield	e. Soil Test Nitrate-N (average ppm)	f. Total Nitrogen Need or Removal	Nitrogen Credits (lbs/acre)				k. Net Nitrogen Need Before Manure Application (Cols. f – g through j) (lbs/acre)	l. Manure Application Option (Write line no. from Form E2a, Col. a)	m. Planned Manure Application Rate/Actual Rate (T/acre)	n. Rate of Manure Nitrogen Available (Form E2a, Col. j) (lbs/acre)	o. Extra Nitrogen Needed as Fertilizer (Cols. k-n) (lbs/acre)
				g. Manure N from Past Years	h. Irrigation Water N (ppm x 0.227 x Ac-in) (lbs/acre)	i. Legume/- Green Manure N (lbs/acre)	j. Fertilizer Nitrogen (Starter, etc.) (lbs/acre)					
2004	170 / 163	3	167 at 2% OM	0	(10 ppm) 20	45	6	96	Ex	18 / 15	108 / 100	-12 / -4

E2b and c Part 1. (Option 2) Annual Pre-Season Plan and Post-Season Summary for Nitrogen (single year record for multiple fields).

a. Field ID	d. Expected Yield/- Actual Yield and Method of Measure	e. Soil Test Nitrate-N (average ppm)	f. Total Nitrogen Need or Removal	Nitrogen Credits (lbs/acre)				k. Net Nitrogen Need Before Manure Application (Cols. f – g through j) (lbs/ac)	l. Manure Application Option (write line no. from Form E2a, Col. a)	m. Planned Manure Application Rate/- Actual Rate (T/ac)	n. Rate of Manure Nitrogen Available (Form E2a, Col. j) (lbs/ac)	o. Extra Nitrogen Needed as Fertilizer (Cols. k-n) (lbs/ac)
				g. Manure N from Past Years	h. Irrigation Water N (ppm x 0.227 x Ac-in) (lbs/ac)	i. Legume/ Green Manure N (lbs/ac)	j. Fertilizer Nitrogen (Starter, etc.) (lbs/ac)					
Home 80	170 163 yield monitor	3	167 at 2% OM	0	(10) 20	45	6	96	Ex	18 15	108 100	-12 -4

E2b and c Part 2. Annual Pre-Season Plan and Post-Season Summary for Phosphorus.¹

Field or Management Area: _____

a. Crop Year ¹	Manure Phosphorus Availability					Crop Phosphorus Balance								
	b. Manure Handling System	c. Planned Manure Application Rate	d. Manure Phosphorus (P ₂ O ₅) Concentration from Analysis	e. Phos. Availability Factor (0.7 or 1.0)	f. Phosphorus Manure Credit (c x d x e) (lb/ac)	Planned Crop		i. Soil Test Phosphorus (ppm) & Method	j. Phosphorus Recommendation (P ₂ O ₅ lbs/ac)	k. P Fertilizer Application (P ₂ O ₅ lbs/ac)	Crop P (P ₂ O ₅) Removal (Use if soil test recommends no P.)		n. P ₂ O ₅ Balance (Cols. f + k - m) (lbs/ac)	o. Potential Soil P ₂ O ₅ Increase or Decrease (n ÷ 20) (ppm)
						g. Name	h. Expected Yield				l. Factor (See Table R-1)	m. Total P Removed (h x l)		
2004	Beef, dirt lot	20 <input checked="" type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	18 <input type="checkbox"/> lbs/ton <input checked="" type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in	0.7	250	Corn	150 bu/-ac	20 Bray -1	Row 0 Bdcst 0	10 (pop-up)	0.3 lbs/-bu	45 lbs/-ac	215	11
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs/ton <input type="checkbox"/> lbs/1,000 gal <input type="checkbox"/> lbs/ac-in									lbs/acre		

¹ It may be preferable to summarize multiple fields for a single year onto one record sheet. If so, change the subtitle from "Field or Management Area" to "Year" and change first column heading from "a. Crop Year" to "a. Field or Management Area" and review other relevant information in the form to be sure it is consistent.

E3. Application Plan for Equipment Operator.

Directions: This document should be photocopied and carried to the field during land application.

Crop Year: _____

Field ID	Manure Source	Planned Manure Application Rate	Incorporate into soil?	Manure Nutrient Applic. Rate (lbs/acre)		Suggested Timing of Manure Application	Commercial Fertilizer Rate (lbs/acre)		Application Instructions
				N	P ₂ O ₅		N	P ₂ O ₅	
Sample North Pivot	Beef Finisher, dirt lot	18 <input type="checkbox"/> Ton/ac <input checked="" type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input checked="" type="checkbox"/> Yes, <input type="checkbox"/> No ___ 1 ___ days	90	360	<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D	0	0	30-ft creek setback
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			
		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1,000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> Yes, <input type="checkbox"/> No ___ days			<input type="checkbox"/> J <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> A <input type="checkbox"/> M <input type="checkbox"/> J <input type="checkbox"/> J <input type="checkbox"/> A <input type="checkbox"/> S <input type="checkbox"/> O <input type="checkbox"/> N <input type="checkbox"/> D			

Application Rate	Tractor Settings		Applicator Settings		Pivot Settings		
	Gear	RPM	PTO/hydraulic	Chain sp. or orifice	% speed	psi/gpm	Dilution: gal manure/1 gal water
							gallons manure
							gallons manure

Year: _____

E4a (Option 1). Solid Manure Application Field Record.

Manure Source: _____ Application Equipment: _____ Net Load Capacity: _____ tons

Date and Times	Field ID or Management Area	Number of Loads	Is manure incorporated into soil? ___ Yes, ___ days later ___ No	Area Covered (acres)	Setbacks Maintained ¹	Wind Direction from:	Wind Speed (mph) ___ <5 ___ >5	Weather Conditions (precipitation)			Operator initials
								Day before Application	Day of Application	Day after Application	
Sample	Home 80	///	___ Yes, ___ days later ___ No	12	30-ft grass buffer	SE	___ <5 ___ >5	dry	dry	0.5 inch rain	JMK
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				
			___ Yes, ___ days later ___ No				___ <5 ___ >5				

¹Federal regulations require a minimum of a 100-ft setback from waters of the U.S. or a 30-ft permanently vegetated buffer for all CAFOs. Setbacks should be shown on your aerial maps. Check for variations in this setback or buffer specific to your own state.

Year: _____

E4a (Option 2). Slurry or Sludge Application Field Record.

Manure Source: _____ Application Equipment: _____ Net Load Capacity: _____ tons

Date and Times	Field ID or Management Area	Number of Loads	Is manure incorporated into soil? ____ Yes, ____ days later ____ No	Area Covered (acres)	Setbacks Maintained ¹	Wind Direction from:	Wind Speed (mph) ____ <5 ____ >5	Weather Conditions (precipitation)			Operator initials
								Day before Application	Day of Application	Day after Application	
Sample	Home 80	III	____ Yes, ____ days later ____ No	12	30-ft grass buffer	SE	____ <5 ____ >5	dry	dry	0.5 inch rain	JMK
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				
			____ Yes, ____ days later ____ No				____ <5 ____ >5				

¹Federal regulations require a minimum of a 100-ft setback from waters of the U.S. or a 30-ft permanently vegetated buffer for all CAFOs. Setbacks should be shown on your aerial maps. Check for variations in this setback or buffer specific to your own state.

Year: _____

E4a (Option 3). Towed Hose or Irrigation System Field Record of Manure Application.

Manure Source: _____ Application Equipment: _____ Pumping Rate: _____ gpm

Date and Times	Field ID	Operating Hrs		Rate of Clean Water Addition	Is manure incorporated into soil?	Area Covered (acres)	Setbacks Maintained ¹	Wind		Weather Conditions (precipitation)			Operator Initials
		Begin	End					Direction from:	Speed (mph)	Day before Application	Day before Application	Day before Application	
Sample 3/30/04		_____ am 2:30 pm	_____ am 8:15 pm	2 to 1	___ Yes, ___ days X ___ No later	130	30-ft grass buffer	SE	___ <5 X ___ >5	dry	dry	0.5 inch rain	RKL
		_____ am _____ pm	_____ am _____ pm	to 1	___ Yes, ___ days ___ No later				___ <5 ___ >5				
		_____ am _____ pm	_____ am _____ pm	to 1	___ Yes, ___ days ___ No later				___ <5 ___ >5				
		_____ am _____ pm	_____ am _____ pm	to 1	___ Yes, ___ days ___ No later				___ <5 ___ >5				
		_____ am _____ pm	_____ am _____ pm	to 1	___ Yes, ___ days ___ No later				___ <5 ___ >5				
		_____ am _____ pm	_____ am _____ pm	to 1	___ Yes, ___ days ___ No later				___ <5 ___ >5				
		_____ am _____ pm	_____ am _____ pm	to 1	___ Yes, ___ days ___ No later				___ <5 ___ >5				

¹Federal regulations require a minimum of a 100-ft setback from waters of the U.S. or a 30-ft permanently vegetated buffer for all CAFOs. Setbacks should be shown on your aerial maps. Check for variations in this setback or buffer specific to your own state.

Year: _____

E4 (Option 4). Irrigation Field Record of Manure Application (if application rate is known).

Manure Source: _____ Application Equipment: _____ Field : _____

Manure Pumping Rate: _____ gpm or _____ ac-inches/hr

Date and Times	Depth of Irrigation Application (inches)	Rate of Clean Water Addition	Is manure incorporated into soil?	Area Covered (acres)	Setbacks Maintained ¹	Wind		Weather Conditions			Operator Initials
						Direction from	Speed (mph)	Day Before Application	Day of Application	Day After Application	
Sample 3/30/04	0.75	2 to 1	<input type="checkbox"/> Yes, _____ days later <input checked="" type="checkbox"/> No	130		SE	____<5 <input checked="" type="checkbox"/> >5	dry	dry	0.5 inch rain	RKL
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				
		to 1	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No				____<5 ____>5				

¹ Federal regulations require a minimum of a 100-ft setback from waters of the U.S. or a 30-ft permanently vegetated buffer for all CAFOs. Setbacks should be shown on your aerial maps. Check for variations in this setback or buffer specific to your own state.

E5a and b. Soil and Manure Test Results.

(or replace with testing laboratory analysis)

Name _____ Permit No. _____

Manure Testing Results

Sample Date _____ Manure Source: _____

Pollutant	-----Concentration (as produced or wet basis)-----			
	(mg/kg or ppm)	lbs/ 1,000 Gallons	lbs/ Acre-Inch	lbs/ Ton
Total Kjeldahl Nitrogen	_____	_____	_____	_____
Organic Nitrogen as N	_____	_____	_____	_____
Ammonia Nitrogen as N	_____	_____	_____	_____
Nitrate Nitrogen as N	_____	_____	_____	_____
Total P as P	_____	_____	_____	_____
Total K as K	_____	_____	_____	_____
Total Solids	_____ %			

Sample Type: ___ Grab ___ Composite Number of Samples _____

Soil Testing Results

Concentration (units as shown)

	<u>Field 1</u>	<u>Field 2</u>	<u>Field 3</u>	<u>Notes:</u>
Field ID	_____	_____	_____	
Phosphorus as P - Bray P1 (ppm)	_____	_____	_____	_____
Organic Matter (percent)	_____	_____	_____	_____
Cation Exchange Capacity (CEC)	_____	_____	_____	_____
pH (standard units)	_____	_____	_____	_____
Sample Date _____	Sample Depth _____			

Concentration (units as shown)

	<u>Field 4</u>	<u>Field 5</u>	<u>Field 6</u>	<u>Notes:</u>
Field ID	_____	_____	_____	
Phosphorus as P - Bray P1 (ppm)	_____	_____	_____	_____
Organic Matter (percent)	_____	_____	_____	_____
Cation Exchange Capacity (CEC)	_____	_____	_____	_____
pH (standard units)	_____	_____	_____	_____
Sample Date _____	Sample Depth _____			

E5c. Crop, Soil, and Water Nutrient Status Indicators.

Directions: Record any relevant information below that may provide insight in to the nitrogen status of the crop or soil.

Field ID or Management Area	Pre-Sidedress Soil Nitrate Test		Chlorophyll Meter Readings				Post-Season Stalk Tissue		Other Observations or Field Test	
	Date	Content (ppm)	Date	Growth Stage	Reading	Reading- % of Reference	Date	Nitrate Conc. (ppm)	Date	Observation
Example	6/10	15	7/15	V18	45	98	10/1	1500	8/15	Lower 3 leaves slightly yellow

E6. (Option 1) Solid Manure Spreader Calibration and Maintenance for _____ Equipment.

Calibration Log

Date: _____ Calibration Completed by: _____

Tractor Gear/RPM	Spreader Setting	Spreader Capacity is Unknown:	Spreader Capacity is Known:	Calculated Application Rate (ton/ac)
/		Area of plastic sheet: _____ ft ² Net Manure Weight on: Sheet 1: _____ lbs Sheet 2: _____ lbs Sheet 3: _____ lbs	Net Manure Weight on Spreader: _____ tons Width of Spread Pattern: _____ ft Travel Distance to Empty Spreader: _____ ft	
/		Area of plastic sheet: _____ ft ² Net Manure Weight on: Sheet 1: _____ lbs Sheet 2: _____ lbs Sheet 3: _____ lbs	Net Manure Weight on Spreader: _____ tons Width of Spread Pattern: _____ ft Travel Distance to Empty Spreader: _____ ft	
/		Area of plastic sheet: _____ ft ² Net Manure Weight on: Sheet 1: _____ lbs Sheet 2: _____ lbs Sheet 3: _____ lbs	Net Manure Weight on Spreader: _____ tons Width of Spread Pattern: _____ ft Travel Distance to Empty Spreader: _____ ft	

Inspection and Maintenance Log

Inspection Date				Maintenance		
				Date	Action	Initials
Inspected by (initials):						
	Is the equipment functioning properly?					
List Item Inspected:	Yes	No	Yes	No	Yes	No

Record will be stored permanently at _____

Solid Manure Spreader Calibration Guide

1. Spreader Capacity is Known.

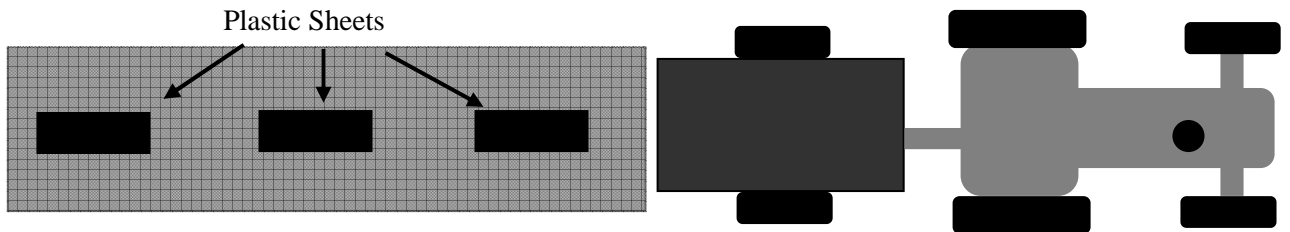
$$\text{Rate per acre} = \frac{\text{Spreader Capacity} \times 43,560}{(\text{Width} \times \text{Travel Distance})}$$

Example: 20-ton manure solids spreader makes a pass every six, 30-inch corn row (15 ft) and empties spreader in 2,400 feet, applying 24 tons per acre.

$$\text{Rate per acre} = \frac{20 \text{ ton} \times 43,560}{(15' \times 2,400')} = 24 \text{ ton/acre}$$

2. Spreader Capacity is Unknown.

- Cut three or more sheets of equally sized plastic. 22 square feet (3 ft x 7 ft 4 inches or 4 ft x 5 ft 6 inches) is the preferred size.
- Weigh empty 5-gallon bucket plus one plastic sheet on a scale: _____ lbs.
- Lay sheets in field with edges secured by stones or other heavy objects.
- Drive tractor at normal speeds and discharge manure at typical rates over plastic sheets. Record tractor gear: _____, engine RPM: _____, and spreader settings: _____



- Check the sheets. Did a reasonably representative application rate fall on the plastic sheets?
- Carefully fold individual sheets without losing manure and place each sheet in separate buckets. Weigh each bucket.
Bucket 1: _____ lbs. Bucket 2: _____ lbs. Bucket 3: _____ lbs.
- Subtract the weight of the empty bucket and plastic (Step b) to determine the net manure weight in each bucket. Net manure weight for
Bucket 1: _____ lbs. Bucket 2: _____ lbs. Bucket 3: _____ lbs.
- Calculate the average weight of buckets. Average Net Manure Weight: _____ lbs.
- Calculate the application rate.

$$\text{Tons per Acre} = \frac{(\text{Net Manure Weight} \times 22)}{\text{Area of plastic sheet (ft}^2)}$$

If plastic sheet = 22 ft², then Tons per Acre = Net Manure Weight

E6. (Option 2) Slurry/Liquid Manure Applicator Calibration and Maintenance for _____ Equipment.

Calibration Log

Date: _____ Calibration completed by: _____

Tractor Gear/RPM	Spreader Setting	Area Method	Calculations	Calculated Application Rate (ton/ac)
/		Net Manure Weight on Spreader: _____ tons Width of Spread Pattern: _____ ft Travel Distance to Empty Spreader: _____ ft		
/		Net Manure Weight on Spreader: _____ tons Width of Spread Pattern: _____ ft Travel Distance to Empty Spreader: _____ ft		
/		Net Manure Weight on Spreader: _____ tons Width of Spread Pattern: _____ ft Travel Distance to Empty Spreader: _____ ft		

Inspection and Maintenance Log

Inspection Date							Maintenance		
	Inspected by (initials):						Date	Action	Initials
	Is the equipment functioning properly?								
List Item Inspected:	Yes	No	Yes	No	Yes	No			

Record will be stored permanently at _____

Slurry or Liquid Tank Applicator Calibration Guide

Directions: From chart below, select

- a. Spreader capacity: _____ pounds or gallons
- b. Distance traveled (length) to empty spreader: _____ ft
- c. Spread pattern width or distance between individual passes: _____ ft
- d. Intersection indicates application rate: _____

If appropriate values cannot be found in table below: $\text{Rate per acre} = \frac{\text{Spreader capacity} \times 43,560}{\text{Spread pattern width} \times \text{Travel length to empty}}$

Example: 3,000-gallon tank spreader [see 1 below] that makes a pass every four, 30-inch corn rows (10 ft) [see 3 below] and empties spreader in 1,200 feet [see 2 below], is applying 11,000 gallons per acre [see 4 below].

Spread Width→	2,000-Gallon Tank						2,500-Gallon Tank						3,000-Gallon Tank						3,500-Gallon Tank						4,000-Gallon Tank					
	10'	15'	20'	25'	30'	35'	10'	15'	20'	25'	30'	35'	10'	15'	20'	30'	40'	50'	10'	15'	20'	30'	40'	50'	10'	15'	20'	30'	40'	50'
Length	Liquid manure application rate (thousands of gallons per acre)																													
600'	15	10	7	6	5	4	18	12	9	7	6	5	22	15	11	7	5	4	25	17	13	8	6	5	29	19	15	10	7	6
800'	11	7	5	4	4	3	14	9	7	5	5	4	16	11	8	5	4	3	19	13	10	6	5	4	22	15	11	7	5	4
1000'	9	6	4	3	3	2	11	7	5	4	4	3	13	9	7	4	3	3	15	10	8	5	4	3	17	12	9	6	4	3
1200'	7	5	4	3	2	2	9	6	5	4	3	3	11	7	5	4	3	2	13	8	6	4	3	3	15	10	7	5	4	3
1400'	6	4	3	2	2	2	8	5	4	3	3	2	10	6	5	3	2	2	11	7	5	4	3	2	12	8	6	4	3	2
1600'	5	4	3	2	2	2	7	5	3	3	2	2	9	5	4	3	2	2	10	6	5	3	2	2	11	7	5	4	3	2
1800'	5	3	2	2	2	1	6	4	3	2	2	2	7	5	4	2	2	1	8	6	4	3	2	2	10	6	5	3	2	2
2000'	4	3	2	2	1	1	5	4	3	2	2	2	6	4	3	2	2	1	7	5	4	3	2	2	9	6	4	3	2	2
2500'	3	2	2	1	1	1	4	3	2	2	1	1	5	3	3	2	1	1	6	4	3	2	2	1	7	5	3	2	2	1
3000'	3	2	1	1	1	1	4	2	2	1	1	1	4	3	2	1	1	1	5	3	3	2	1	1	6	4	3	2	1	1

Spread Width→	4,500-Gallon Tank						5,000-Gallon Tank						5,500-Gallon Tank						6,000-Gallon Tank					
	10'	15'	20'	30'	40'	50'	10'	15'	20'	30'	40'	50'	10'	15'	20'	30'	40'	50'	10'	15'	20'	30'	40'	50'
Length	Liquid manure application rate (thousands of gallons per acre)																							
600'	33	22	16	11	8	7	36	24	18	12	9	7	40	27	20	13	10	8	44	29	22	15	11	9
800'	25	16	12	8	6	5	27	18	14	9	7	5	30	20	15	10	7	6	33	22	16	11	8	7
1000'	20	13	10	7	5	4	22	15	11	7	5	4	24	16	12	8	6	5	26	17	13	9	7	5
1200'	16	11	8	5	4	3	18	12	9	6	5	4	20	13	10	7	5	4	22	15	11	7	5	4
1400'	14	9	7	5	4	3	16	10	8	5	4	3	17	11	9	6	4	3	19	12	9	6	5	4
1600'	12	8	6	4	3	2	14	9	7	5	3	3	15	10	7	5	4	3	16	11	8	5	4	3
1800'	11	7	5	4	3	2	12	8	6	4	3	2	13	9	7	4	3	3	15	10	7	5	4	3
2000'	10	7	5	3	2	2	11	7	5	4	3	2	12	8	6	4	3	2	13	9	7	4	3	3
2500'	8	5	4	3	2	2	9	6	4	3	2	2	10	6	5	3	2	2	10	7	5	3	3	2
3000'	7	4	3	2	2	1	7	5	4	2	2	1	8	5	4	3	2	2	9	6	4	3	2	2

E6. (Option 3) Irrigation Equipment or Towed Hose Applicator Calibration and Maintenance for _____ Equipment.

Calibration Log

Date: _____ Calibration completed by: _____

Tractor Gear/RPM	Other Equipment Settings	Field Measurements	Calculations	Calculated Application Rate (ton/ac)

Inspection and Maintenance Log

Inspection Date						Maintenance		
Inspected by (initials):						Date	Action	Initials
	Is the equipment functioning properly?							
List Item Inspected:	Yes	No	Yes	No	Yes	No		

Record will be stored permanently at _____

Pivot or Other Sprinkler Application or Towed Hose Unit Calibration

A. If Flow Rate is Known:

- Estimate pumping time: _____ hours
- Estimate water flow rate: _____ gallons per minute
- Estimate acres covered: _____ acres
- Estimate application rate:

$$\frac{\text{Pumping time} \times \text{flow rate}}{\text{Inches (or ac-in/ac)}} = \frac{\text{_____} \times \text{_____}}{\text{_____ inches}} = \text{Acres} \times 450 \times 450$$

B. If Flow Rate is NOT Known:

- Identify rated pump pressure and flow rate: _____ psi at _____ gpm
- Identify actual pump pressure: _____ psi
- Estimate actual flow rate:

$$\text{GPM}_{\text{actual}} = \text{GPM}_{\text{rated}} \times \sqrt{\frac{P_{\text{actual}}}{P_{\text{rated}}}} = \text{_____} \times \sqrt{\frac{\text{_____}}{\text{_____}}} = \text{_____ gpm}$$

- Substitute actual flow rate from c. into the flow rate space in d. of “A. If flow rate is known” and complete calculation of application rate.

*Square root

C. Optional Method for Pivot or other Sprinkler Irrigation System

- Place 4 to 6 rain gauges (pans or straight-sided plastic cups will also work) in line with the pivot center point at about equally spaced intervals. Placement on access road away from crop canopy is preferred.

- Measure depth in rain gauges and calculate average.

Gauge #1: _____ inches #2: _____ inches #3: _____ inches #4: _____ inches #5: _____ inches #6: _____ inches

Average depth: _____ inches

F2. Livestock Waste Discharge Notification.¹⁷

Name: _____
Permitted Operation Name

Owner/Manager: _____

Address: _____
P.O. Box, Street Address

City, State, and Zip Code

Legal Description of Operation:

_____, of _____, _____ N, _____ 9 E or 9 W, _____ County
1/4 1/4 Section Township Range

Do you have an NPDES Permit? ____ Yes ____ No If yes, Permit No. _____

Complete the following:

- 1 List reason(s) for discharge (that is, power failure, large storm or chronic wet period, leak or break in water supply system, component failure of the waste control facility; and/or releases during land application due to equipment failure, accidents, or irrigation equipment failure):

2. The discharge flowed into _____
(ditch, drainage way, stream name)

3. Did the discharge flow directly into surface water or did it flow over cropland before discharging to surface water?

4. The approximate width and depth of the surface water (which the discharge entered):
_____ (width in ft) and _____ (depth in ft)

5. The discharge started on (date and time): Please indicate if this was the actual time or if this was when the discharge was discovered.

(continued on next page)

¹⁷Adapted from Nebraska NDEQ Discharge Notification Form.

6. The discharge ended on (date and time): Please indicate if this was the actual or the estimated time.

7. Average flow of the discharge was: _____ (gallons/minute)

8. Estimated total volume of discharge (cu.-ft.): _____ (L x W x D)

9. List any damage to the waste control facility: _____

10. Describe factors and conditions that were used to minimize the adverse effects of the discharge on the environment:

11. List changes or actions taken (or plan to take) to prevent future potential discharges: _____

Optional Information

1. You may submit rainfall, land application, and system storage records for up to a 12-month period before the discharge to demonstrate the need for the discharge.
2. If you choose to sample, the following items should be analyzed. At a minimum, sample locations must include point of discharge, upstream, downstream, and the mix zone (where the discharge mixes with surface water). Provide a map with collection sites marked.
 - (a) Five-day Biochemical Oxygen Demand (BOD-S)
 - (b) Total ammonium-nitrogen
 - (c) Nitrate-nitrite nitrogen
 - (d) pH
 - (e) Temperature of the effluent and receiving stream
 - (f) Sodium
 - (g) Total phosphorus
 - (h) Chlorides
 - (i) Chemical Oxygen Demand (COD)
 - (j) Total Kjeldahl nitrogen
 - (k) Dissolved oxygen (field measurement)
3. Was sample kept cool with ice during elapsed time between sample collection and delivery to lab?
_____ Yes _____ No

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X _____
Signature of Authorized Representative Date

F4. Annual NPDES Report.

Adapted from *NPDES Permit Writer's Guidance Manual*. U.S. Environmental Protection Agency, Office of Water, December 31, 2003. EPA-833-B-04-001.

NPDES CAFO PERMIT ANNUAL REPORT			
NPDES Permit Number		Reporting Period (mm/dd/yyyy-mm/dd/yyyy)	
		/ / - / /	
Facility Name:			
I. Type and Number of Animals			
Report the maximum number of each type of animal confined at the facility at any one time.			
Type	Number in Open Confinement	Number Housed Under Roof	
Mature dairy cow			
Dairy heifers			
Veal calves			
Other cattle			
Swine (55 lbs or more)			
Horses			
Sheep or lambs			
Turkey			
Chickens (broilers)			
Chickens (layers)			
Ducks			
Other (specify) _____			

(continued on next page)

II. Manure, Litter, and Process Wastewater Production

Report the estimated amount of manure, litter, and process wastewater that were generated at the facility in the 12-month period covered by this report.

A. Amount of manure generated in the 12-month period covered by this report. _____(tons)

B. Amount of litter generated in the 12-month period covered by this report. _____(tons)

C. Amount of wastewater generated in the 12-month period covered by this report. _____(tons)

If amount is known in acre-inches, then: Tons = Acre-inches x 110

If amount is known in gallons, then: Tons = Gallons x 0.0042

If amount is known in cubic feet, then: Tons = Cubic feet x 0.031

III. Manure, Litter, and Process Wastewater Transferred to Other Persons

Report the estimated amount of manure, litter, and process wastewater that were generated at the facility in the 12-month period covered by this report.

A. Amount of manure generated in the 12-month period covered by this report. _____ (tons)

B. Amount of litter generated in the 12-month period covered by this report. _____ (tons)

C. Amount of wastewater generated in the 12-month period covered by this report. _____ (tons)

If amount is known in acre-inches, then: Tons = Acre-inches x 110

If amount is known in gallons, then: Tons = Gallons x 0.0042

If amount is known in cubic feet, then: Tons = Cubic feet x 0.031

IV. Land Application of Manure, Litter, and Process Wastewater

A. Report the total number of acres of land that are covered by this facility’s nutrient management plan. Include all land application acres covered by the nutrient management plan, whether or not they were used for land application during the 12-month period covered by this report.

Total number of land application acres covered by the nutrient management plan. _____ acres

B. Report the total number of acres of land where manure, litter, or process wastewater generated at this facility was spread. Include only land application areas that are under the control of this CAFO facility.

Total number of acres under the control of the CAFO used for land application in the 12-month period covered by this report. _____ acres

V. Summary of Discharges

Provide a summary of discharges of manure, litter, and/or process wastewater form the production area(s) that occurred in the 12-month period covered by this report. Attach additional sheets, if needed.

Date ^a	Time ^b	Location ^{c,f}	Description ^{d,f}	Volume ^e

^a Date: The date of the discharge. If the discharge was detected after it happened, give an estimate of the date when the discharge occurred.

^b Time: The time of the discharge. If the discharge was detected after it happened, give an estimate of the time when the discharge occurred.

^c Location: The location of the discharge to waters of the U.S. Be specific. Include the name of the water body and a specific description of where the manure, litter, or process wastewater entered the water body. Include landmarks or other points of reference (e.g., Three Mile Creek, at southeast corner of feedlot where creek bends to the west).

^d Description: Provide other relevant information about the discharge, including the source, cause, composition (e.g., emergency overflow of process wastewater from lagoon #2), and impacts observed (e.g., fish kill in water body).

^e Volume: Give an estimate of the number of gallons or tons of manure, litter, or process wastewater discharge.

^f NPDES CAFO regulations do not require that this information be included in the annual report.

(continued on next page)

VI. Nutrient Management Plan

Indicate whether the facility’s nutrient management plan was either developed or approved by a certified nutrient management planner. Note: The [permitting authority] does not require CAFO owners or operators to use a certified nutrient management planner to prepare or approve nutrient management plans.

Was the current version of the facility’s nutrient management plan prepared or approved by a certified nutrient management planner? Yes No

VI. Nutrient Management Plan

Indicate whether the facility’s nutrient management plan was either developed or approved by a certified nutrient management planner. Note: The [permitting authority] does not require CAFO owners or operators to use a certified nutrient management planner to prepare or approve nutrient management plans.

Was the current version of the facility’s nutrient management plan prepared or approved by a certified nutrient management planner? Yes No

VII. Instances of Noncompliance Not Previously Reported

During the past 12 months, have there been any instances of noncompliance that have not been reported to the permitting authority? Yes No

If during the past 12 months there been instances of noncompliance that have not been reported to the permitting authority, please provide the following information for each instance along with this annual report:

- Description of the noncompliance and its cause
- The period that the operation was in noncompliance with permit conditions, including exact dates and times.
- In those cases where the noncompliance has not been corrected, the anticipated time it is expected to continue.
- Description of the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

VIII. Certification

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: _____

Print Name: _____

Submit to [permitting authority and address]

F6. Producer Record of Odor Complaints.

Farm: _____

Date and Time of	Neighbor Expressing Concern	Concern Expressed	Weather Conditions at Time of Concern	Operation's Follow-up Actions	Initials
Contact: Odor Observations:			Wind Speed ¹ : _____ Direction wind is from: _____ Sky Conditions ² : _____ Temperature: _____		
Contact: Odor Observations:			Wind Speed ¹ : _____ Direction wind is from: _____ Sky Conditions ² : _____ Temperature: _____		
Contact: Odor Observations:			Wind Speed ¹ : _____ Direction wind is from: _____ Sky Conditions ² : _____ Temperature: _____		

¹Wind Conditions: 1...calm or light breeze (0-5 mph) 2...moderate wind (5-15 mph) 3...strong wind (15+ mph)

²Sky Conditions: SY...Sunny; PC...Partly Cloudy; MC...Mostly Cloudy; OC...Overcast; HZ...Hazy; NT...Night

G2. Manure Transfer to Off-Farm Users.¹⁸

Method of verification of manure transfer amounts: Scale Flow meter Count of loads Other: _____

Date	Off-Farm User Name/Address	Employee Making Entry	Amount of Transfer	Manure Analysis		Total Nutrient Transfer		Location of Field Receiving Manure
				N	P ₂ O ₅	N (lbs)	P ₂ O ₅ (lbs)	
Mar. 6-9, 2005	John Corn Grower, RR 2, Anytown, NE	Jim Part Time	2,000 <input type="checkbox"/> Tons <input checked="" type="checkbox"/> Gals. <input type="checkbox"/> Ac-in.	16	<input checked="" type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in	32,000	38,000	Corn Grower's Home 80 (1 mi north of feedlot)
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.		<input type="checkbox"/> Lbs/ton <input type="checkbox"/> Lbs/1,000 gal <input type="checkbox"/> Lbs/ac-in			
Total			<input type="checkbox"/> Tons <input type="checkbox"/> Gals <input type="checkbox"/> Ac-in.					

¹⁸ All transfer of manure to a third party by a permitted CAFO must include providing this third-party representative with a copy of the most recent manure analysis for the manure being transferred.

G3. Alternative Technology Inspection and Maintenance Log.

Farm: _____ Checked by: _____

Date					
Inspected by (initials):					

Inspection Results¹

Maintenance Log

Inspection Issue:	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Date	Maintenance Performed and Initials

History and Key Characteristics of _____

(Insert farm/ranch name here.)

Purpose: *This worksheet is a communication tool that can be used internally and/or externally to give a sense of the past, present, and future of the operation. It provides additional information and details beyond the environmental policy statement and sets up a job description for each person (or group of people) involved in the farm or ranch.*

History: *Describe how your operation got started and how it evolved into the farm or ranch you manage today. Also include important information about the area, community, or natural resources that are relevant to your environmental decision-making.*

Farm/Ranch Personnel: *Describe each employee’s major responsibilities. Depending on the size of your operation you may refer to them by name, job title, or as a group. Do not forget to include consultants or contractors such as veterinarians, crop consultant/agronomist, nutritionist, lender, accountant, truckers, contractors/-engineers working on a building project, or others whose advice may impact the management of the farm/ranch, especially environmental management.*

Farm/Ranch Personnel	Responsibilities

Other Information: *Describe other characteristics of the operation, production practices, performance measures, or improvements relevant to the stakeholder(s) that will receive this information. What makes your operation stand out from your competitors?*

External Communication Log

Date Received	Description of Contact	Referred to	Follow-Up (date and comments)
Example: 9/12/05	Phone call from local elementary school requesting tour of farm	JOO	9/14/05 Tour will be on March 23