

Section N: Record Keeping and Land
Application Log Forms

SECTION N. LAND APPLICATION LOG FORMS

The following log forms are enclosed:

1. Manure Source Details
2. Annual Report Form For Permitted Confined Animal Facilities
3. Previous Manure Applications and Nitrogen Credits
4. Calculating Residual/Supplemental Nitrogen Amounts
5. Fertilizer Recommendations and Crop Requirements
6. Determining the Manure Application Rate
7. Animal Waste Land Application Record For Permitted Confined Animal Facilities

Recordkeeping

Keeping records plays a critical role in a manure management system. Records are essential to determine appropriate rates of manure to apply to the land while protecting surface and groundwater resources. It enables operators to make good annual and long-term decisions concerning efficient use of manure. Additionally, records serve to document compliance with regulations or voluntary adoption of best management practices.

Records should be maintained for five years or as otherwise instructed by specific federal and state laws, local county ordinances and/or program requirements.

At a minimum, track manure applications by collecting and keeping records of the following information:

- **Soil test results and recommendations for all fields receiving manure (sampled and tested prior to hauling manure).**
- **Manure test results.**
- **Identity of the fields hauled to (including acres spread on and where in the field).**
- **Calculated "planned" manure application rate per field.**
- **Calculated "actual" manure application rate per field.**
- **Method of manure application.**
- **Date(s) and time(s) of manure application.**

The following additional records are recommended if the goal is to implement a whole farm nutrient budget program:

- **Soil test results and recommendations for the remaining fields receiving nutrients from other sources (i.e. commercial fertilizer).**
- **Form/rates of other nutrient sources applied per field.**
- **Crop planting and harvest dates and yields per field.**

Soil testing on a whole farm basis provides fertility level information on all fields allowing operators to make decisions as to where manure nutrients can best be utilized.

The Manure Nitrogen and Phosphorus Application Worksheets provided with this plan serve as excellent recordkeeping tools to document test results and manure applications.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

ANNUAL REPORT FORM FOR PERMITTED CONFINED ANIMAL FACILITIES

REPORTING PERIOD: _____

PERMITTEE NAME: _____ PERMIT NUMBER: _____

PHONE NUMBER: _____ AFIN NUMBER: _____

FACILITY TYPE AND SIZE: _____
(ie., 200 Cow Dairy, 2,500 Swine Finishing, 80,000 Bird Layer Operation, etc.)

WASTE DISPOSAL SYSTEM CONSISTS OF: _____
(ie., Holding Pond, Holding Pond & Settling Basin, Concrete Holding Tank, etc.)

WASTE APPLICATION METHOD: _____
(ie., Tank Spreader, Irrigation System, etc.)

NO. OF APPLICATION FIELDS: _____

TOTAL AVAILABLE ACREAGE: _____

WASTEWATER SAMPLE LOCATION: _____
(Lagoon During Pumping or Field During Application)

YOU MUST SUBMIT A COPY OF THE **WASTEWATER ANALYSIS** FOR EACH SAMPLE PROVIDED TO THE COOPERATIVE EXTENSION SERVICE OR A PRIVATE LAB. THE WASTEWATER ANALYSIS MUST INCLUDE: pH (su), TOTAL NITROGEN, AMMONIA NITROGEN, TOTAL POTASSIUM, TOTAL PHOSPHORUS, AND PERCENT SOLIDS.

IN ADDITION, YOU MUST SUBMIT A COPY OF THE **SOIL ANALYSIS** FOR EACH FIELD WITH THIS FORM. THE SOIL ANALYSIS MUST INCLUDE: pH (su), POTASSIUM (lbs/ac), PHOSPHORUS (lbs/ac), AND NITRATES (lbs/ac). AT LEAST ONE SOIL ANALYSIS SHOULD BE DONE FOR EACH 30 ACRE TRACT.

PLEASE COMPLETE THE TABLE ON THE BACK FOR THE LAND APPLICATION REPORT. YOU MUST SIGN AND DATE THIS REPORT AND SUBMIT IT TO THE DEPARTMENT PRIOR TO MAY 30th OF EACH YEAR. PLEASE KEEP A COPY OF THIS REPORT, THE SOIL ANALYSIS, AND THE WASTEWATER ANALYSIS FOR YOUR RECORD AT THE FACILITY.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION.

OWNER OR OPERATOR (Please Print)

SIGNATURE

DATE

Mail complete annual report form and annual application report to:

Arkansas Department of Environmental Quality
Permits Branch, Water Division
5301 Northshore Drive
North Little Rock, AR 72118

ANNUAL ANIMAL WASTE LAND APPLICATION REPORT

PERMITTEE NAME: _____ PERMIT NUMBER: _____

Field Name or/ and Number	Crop Type	Total* Area Applied (acres)	Total** Volume Applied (gallons)	Total*** Nitrogen (lbs/1000 gal.)	Calculated Nitrogen Applied (lbs/ac)
(1)	(2)	(3)	(4)	(5)	(6)

* Total available area is the area where manure was applied during the reporting period (this data can be obtained from the management plan).
 ** Total volume applied is the total volume applied to the field during the whole reporting period (this data can be obtained from record sheet).
 *** Total Nitrogen concentration (lbs/1000 gallons) can be obtained from the wastewater analysis sheet.

Column (6) = Nitrogen Applied (lbs/ac) = Column(4) X Column(5) ÷ Column (3) ÷ 1,334

NOTE: You may make additional copies of this table as needed.

Mail complete annual report form and annual application report to:
 Arkansas Department of Environmental Quality
 Permits Branch, Water Division
 5301 Northshore Drive
 North Little Rock, AR 72118

Previous manure applications and nitrogen credits.

Date / /

Field	Nitrogen credit from application before last season's crop				Nitrogen credit from application before crop 2 seasons ago				Previous Manure Credit (PMC) lb/a	
	Manure N Analysis lb/ton or lb/1000 gal	Application Rate ton/a or 1000 gal/a	% Available (Year 2)	N Credit lb/a	Manure N Analysis lb/ton or lb/1000 gal	Application Rate ton/a or 1000 gal/a	% Available (Year 3)	N Credit lb/a		
CALCULATION/ REFERENCE: COLUMN:	AE-1189 SHEET 1, COL 1 (1)	AE-1189 SHEET 2, COL 4 (2)	TABLE 2 (3)	(1)x(2)x(3)/100 (4)	AE-1189 SHEET 1, COL 1 (5)	AE-1189 SHEET 2, COL 4 (6)	TABLE 2 (7)	(5)x(6)x(7)/100 (8)	(4)+(8) (9)	

Fertilizer recommendations and crop requirements.

Date / /

Field	Crop	Target Yield bu/a, ton/a or lb/a	Nitrogen Requirement lb/a	Soil Test Nitrogen (STN) lb/a	Sampling Date Adjustment (SDA) lb/a	Previous Crop Credits (PCC) lb/a	Previous Manure Credit (PMC) lb/a	Nutrient Requirements				
								Net N	P2O5 lb/a	K2O		
CALCULATION/ REFERENCE:												
COLUMN:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		

Determining the manure application rate.

Date / /

Field	Nutrient Requirement		Estimated Manure Analysis		% Availability		Nutrient Available		Target Manure Application Rate						
	N lb/a	P2O5 lb/a	N lb/ton, or lb/1000 gal	P2O5 lb/ton, or lb/1000 gal	N %	P2O5 %	N lb/ton, or lb/1000 gal	P2O5 lb/ton, or lb/1000 gal	N ton/a, or lb/1000 gal	P2O5 ton/a, or lb/1000 gal					
CALCULATION/ REFERENCE:	SHEET 2, COL. 8	SHEET 2, COL. 9	SHEET 2, COL. 10	AE-1189 SHEET 1, COL. 4	AE-1189 SHEET 1, COL. 5	TABLE 2	TABLE 3	TABLE 3	(4)X(7) /100	(5)X(8) /100	(6)X(9) /100	(1)/(10)	(2)/(11)	(3)/(12)	
COLUMN:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

ANIMAL WASTE LAND APPLICATION RECORD FOR PERMITTED CONFINED ANIMAL FACILITIES

PERMITTEE: _____ PERMIT NUMBER: _____

APPLICATION METHOD: _____

Field Name or/and Number	Date Applied	Crop Type	Area Applied (acres)	Volume Applied (gallons)

NOTE: Facility record; **DO NOT MAIL THIS**; Keep this record at the facility.
Make additional copies of this table as needed.

From: [McWilliams, Katherine](#)
To: [Richardson, Stefanie](#)
Subject: FW: NMP Section N
Date: Thursday, March 12, 2015 1:54:59 PM

ARG590001

Thanks!

From: C H Hog Farms, Inc. [mailto:chhogfarmsinc@yahoo.com]
Sent: Wednesday, March 11, 2015 4:41 PM
To: McWilliams, Katherine
Cc: Solaimanian, Jamal; Bailey, John
Subject: Re: NMP Section N

Ms. McWilliams,

Section N of the NMP does need to be included. Our records indicate that we did send Section N along with the other sections at the time we submitted the NOI on 2/26. I will reforward the email now.

Thank you,
Jason Henson

From: "McWilliams, Katherine" <MCWILLIAMSK@adeq.state.ar.us>
To: "chhogfarmsinc@yahoo.com" <chhogfarmsinc@yahoo.com>
Cc: "Solaimanian, Jamal" <JAMAL@adeq.state.ar.us>; "Bailey, John" <BAILEY@adeq.state.ar.us>
Sent: Wednesday, March 11, 2015 1:34 PM
Subject: NMP Section N

Mr. Henson,

I was reviewing the submitted document and notice that Section N of the NMP was missing the page titled Recordkeeping that was in the NMP that is currently approved. Was it an oversight and needs to be included, or was it intentionally left out? If it was meant to included, please send me it to me.

Thanks,
Katherine McWilliams
Engineer
ADEQ, Water Division
501-682-0651

From: [McWilliams, Katherine](mailto:McWilliams_Katherine)
To: [Richardson, Stefanie](mailto:Richardson_Stefanie)
Subject: FW: NMP Modification Request for C & H Hog Farms - Utilization of Waste Storage Pond 2 - Email #7
Date: Thursday, March 12, 2015 1:54:29 PM
Attachments: [NMP Section N.zip](#)

ARG590001

Thanks!

From: C H Hog Farms, Inc. [mailto:chhogfarmsinc@yahoo.com]
Sent: Thursday, March 12, 2015 1:50 PM
To: McWilliams, Katherine; Bailey, John; Water-Inspection-Report; Yarberry, Katherine
Cc: C H Hog Farms Inc.
Subject: Re: NMP Modification Request for C & H Hog Farms - Utilization of Waste Storage Pond 2 - Email #7

Attached is Section N of the NMP which now includes the Recordkeeping page that was missing from the original scanned document.

Thank you,
Jason Henson

From: "C H Hog Farms, Inc." <chhogfarmsinc@yahoo.com>
To: "mcwilliamsk@adeq.state.ar.us" <mcwilliamsk@adeq.state.ar.us>
Sent: Wednesday, March 11, 2015 4:47 PM
Subject: Fw: NMP Modification Request for C & H Hog Farms - Utilization of Waste Storage Pond 2 - Email #7

Ms. McWilliams,

In addition to reforwarding Section N to the original recipients, we are also forwarding Section N to you directly.

Thanks,
Jason Henson

----- Forwarded Message -----

From: "C H Hog Farms, Inc." <chhogfarmsinc@yahoo.com>
To: John Bailey <bailey@adeq.state.ar.us>; "Water-permit-application@adeq.state.ar.us" <water-permit-application@adeq.state.ar.us>; "yarberryk@adeq.state.ar.us" <yarberryk@adeq.state.ar.us>
Sent: Wednesday, March 11, 2015 4:42 PM
Subject: Fw: NMP Modification Request for C & H Hog Farms - Utilization of Waste Storage Pond 2 - Email #7

Reforwarding Section N of the NMP as per the email inquiry.

----- Forwarded Message -----

From: "C H Hog Farms, Inc." <chhogfarmsinc@yahoo.com>

To: John Bailey <bailey@adeq.state.ar.us>; "water.permit.application@adeq.state.ar.us" <water.permit.application@adeq.state.ar.us>; "yarberryk@adeq.state.ar.us" <yarberryk@adeq.state.ar.us>
Cc: Richard Gray <richard_gray@cargill.com>; David Brown (Cargill Pork Production) <david_brown@cargill.com>
Sent: Thursday, February 26, 2015 4:24 PM
Subject: NMP Modification Request for C & H Hog Farms - Utilization of Waste Storage Pond 2 - Email #7

This is the final email pertaining to this particular modification request. Attached is Section N of the NMP.

Regards,
Jason Henson