MARYLAND DEPARTMENT OF THE ENVIRONMENT

Land and Materials Administration • Resource Management Program
1800 Washington Boulevard • Suite 610 • Baltimore Maryland 21230-1719
410-537-3314 • 800-633-6101 x3314 • www.mde.maryland.gov

NOTICE OF INTENT

General Discharge Permit for Animal Feeding Operations (AFOs) (19AF, MDG01)
Land and Materials Administration – Resource Management Program
Issued Pursuant to Title 9, Environment Article, *Annotated Code of Maryland*, and Code of Maryland Regulations (COMAR) 26.08.04

Submission of this Notice of Intent (NOI) constitutes notice that the person identified in this form intends to operate under and comply with all terms and conditions of the State NPDES General Discharge Permit for AFOs (AFO Permit). The discharge of animal waste, including manure, poultry litter, and process wastewater to waters of the State is prohibited unless an AFO has been registered under the AFO Permit by the Maryland Department of the Environment ("MDE"). A person shall hold a CAFO discharge permit issued by MDE before beginning construction on any part of a new CAFO.

Please submit this completed NOI Form to the following address:

Maryland Department of the Environment
Land and Materials Administration AFO Division
1800 Washington Boulevard, Suite 610
Baltimore, Maryland 21230-1719

General Information

RECEIVED
OCT 15 2021
AFO DIVISION

AI Number: 19455

1. **LEGAL Name of Applicant** *(must match name on required plan)*: Kris Cohee

2. **AFO Type** *(circle one)*: (CAFO) / MAFO

3. **Applying for** *(check one)*:
   - ☐ New Coverage *see column "A" in Question 4*
   - ☒ Continuation of Coverage (renewal) *see column "B" in Question 4*
   - ☐ Modification of 19AF Coverage *see column "C" in Question 4*

4. **Reason for NOI** *(please fill out corresponding column)*:

A. New Coverage	B. Continuation of Coverage (renewal)	C. Modification of 19AF Coverage
☐ New owner/operator ☐ Proposed operation *(NO construction may begin until permit coverage is obtained)* • Date of anticipated start of AFO operation: _____	☒ No changes in operation ☐ There has been a change in one or more of the following *(please indicate)*: ○ Size or number of houses ○ Animal number, resulting in change of size category ○ CAFO to MAFO, MAFO to CAFO ○ No-Land to Land, Land to No-Land ○ Conventional operation to organic	☐ Expanding ☐ Change in animal number, resulting in change of size category ☐ Change from CAFO to MAFO ☐ Change from MAFO to CAFO ☐ Change from no-land to land ☐ Change from land to no-land ☐ Change from conventional to organic operation

Applicant (Owner/Operator Information)

5. Mailing Address of Applicant: Kris Cohee
   City: PO Box 38 State: Denton, MD Zip Code: 21629

6. Telephone Number(s) of Applicant: (Home)
   (Cell) [redacted]

7. Email of Applicant:

Farm Information

Please attach a topographic map including the production area as well as the land application area (if applicable)

8. Farm Name: ☐ Same as Legal Name
   ☒ Other *(please specify)*: Cohee Farm (please remove "Earl" - farm in Patten Rd is just "Cohee Farm")

9. Farm Address: 8019 Patten Rd
   City: Denton County: Caroline Zip Code: 21629

10. Watershed/Hydrologic Unit Code (HUC) (12-digit): 021303060615

11. Latitude/Longitude of Production Area (Deg/Min/Sec): 38-49-42 / 75-45-27

12. Animal Information:

A. Animal Type(s) *(from AFO size chart)*	B. Maximum Number of Animals *at any given time* *(For poultry, please indicate bird type and number per flock)*	C. Operation Size *(consult AFO size chart)*	D. Animal Confinement Type *(e.g. house, feedlot, barn, milking parlor, pen)*
poultry	Rooster - 139,000	Lg.	house

**For poultry only (13-16)*

13. *Number of poultry houses: 4

14. *Combined square footage of *all* poultry houses: 144,000

15. *Date(s) poultry houses constructed: 2016

16. *Integrator *(check one)*:
   ☐ Allen-Harim ☒ Mountaire
   ☐ Amick ☐ Perdue
   ☐ Coleman ☐ Tyson
   ☐ Other *(please specify)*: _____

Contact Information:
Phone No.: _____
Address: _____

Manure/Mortality Management

17. **Total Manure/Litter/Wastewater generated *annually*:** 1164 *circle one:* (tons / lbs / gallons)

18. **Total Manure/Litter/Wastewater transported offsite *annually*:** all that is removed (varies per yr) *circle one:* (tons / lbs / gallons)

19. ****Total number of acres controlled by applicant available for land application of manure/litter/process wastewater:** *Owned:* 0 *Leased:* 0

***40 CFR Parts 122.23(b)(3) and 412.2(c) define "land application area" as all land under the control of the AFO owner/operator, whether by ownership, lease, or agreement, to which manure, litter or process wastewater is or may be applied.*

20. **Manure Storage** *(please list individually)*:

A. Type *(e.g. shed, lagoon, pit)*	B. Capacity *(ft³, gal)*	C. Solid/Liquid
Roofed Shed	50'x128' ≈ 32,000 cu ft	solid

21. **Mortality Management Method:**

- ☑ Compost
- ☑ Freeze
- ☐ Render
- ☐ Incinerate
- ☐ Other *(please specify)*: _____

CAFOs Only - Fees

Once a completed NOI is received by MDE and processed, MDE will invoice the applicant for any permit fees owed pursuant to COMAR 26.08.04.09-1.

Required Plan

CAFO permit application requirements at 40 CFR §122.21(i)(1)(x) specify that applications for coverage (including NOIs) must include nutrient management plans (NMPs) that at a minimum satisfy the requirements specified in 40 §122.42(e). Comprehensive Nutrient Management Plans (CNMPs), as defined in the General Discharge Permit for Animal Feeding Operations (AFOs) (19AF, MDG01), satisfy these requirements. An application will not be processed until a completed NOI form and a current CNMP are received. A CNMP must be developed by a certified and licensed plan writer, and in addition to the federal requirements, must satisfy the nutrient management requirements in COMAR 15.20.07 and 15.20.08.

Certification

By signing this form, I the applicant or duly authorized representative, do solemnly affirm under the penalties of perjury that the contents of this application are true to the best of my knowledge, information, and belief. I hereby authorize the representatives of MDE to have access to the AFO and associated lots/facilities (farms) for inspection and to records relating to this application at any reasonable time. I acknowledge that depending on the type of permit applied for, other permits or approvals may be required. The personal information requested on this form is intended to be used in processing your NOI. This Notice is provided pursuant to Title 4 of the General Provisions Article, Annotated Code of Maryland. Your NOI may not be processed if you fail to provide all requested information. You have the right to inspect, amend, or correct this form. MDE is a public agency and subject to the Maryland Public Information Act (Md. Code Ann., Gen. Prov. §§ 4-101, et seq.). This form may be made available on the Internet via MDE's website and is subject to inspection or copying, in whole or in part, by the public and other governmental agencies, if not otherwise protected by federal or State law.

Signature of Applicant / duly authorized representative

10/14/21
Date

Kris Cohee
Printed Name of Applicant / duly authorized representative

Owner
Title

AFO Size Chart

Animal Type	Circumstances under which Animal Feeding Operations Require Permit Coverage		
	CAFO or MAFO Registration Required	CAFO/MAFO Registration Required under Certain Circumstances	Registration Needed Only if Designated
	Large	Medium	Small
Cattle (includes heifers)	1000 or more animals	300—999 animals	less than 300 animals
Dairy cattle	700 or more animals	200—699 animals	less than 200 animals
Horses	500 or more animals	150—499 animals	less than 150 animals
Veal	1000 or more animals	300—999 animals	less than 300 animals
Swine ≥ 55 pounds	2500 or more animals	750—2499 animals	less than 750 animals
Swine < 55 pounds	10,000 or more animals	3,000—9,999 animals	less than 3,000 animals
Sheep and lambs	10,000 or more animals	3,000—9,999 animals	less than 3,000 animals
Ducks with liquid manure handling÷	5,000 or more animals	1,500—4,999 animals	less than 1,500 animals
Chickens with liquid manure handling	30,000 or more animals	9,000—29,999 animals	less than 9,000 animals
Ducks with dry manure handling	30,000 or more animals	10,000—29,999 animals	less than 10,000 animals
Laying hens with dry manure handling	82,000 or more animals	25,000—81,999 animals	less than 25,000 animals
Chickens (other than laying hens) with dry manure handling	125,000 or more animals or greater than or equal to total house size of 100,000 ft^2	37,500– 124,999 animals *and* less than total house size of 100,000 ft^2	less than 37,500 animals
Turkeys	55,000 or more animals	16,500 –54,999 animals	less than 16,500 animals

÷A separate discharge permit is required for large category duck CAFOs

CNMP WEB TOOL

Version 4.0

COMPREHENSIVE NUTRIENT MANAGEMENT PLAN

Cohee Farm
Kris Cohee

8019 Patten Rd.
Denton, Maryland 21629

MAILING ADDRESS
PO Box 38
Denton, Maryland 21629

PREPARED IN COOPERATION WITH THE

NRCS

U.S. Department of Agriculture
Natural Resources Conservation Service

AND THE

Caroline Soil Conservation District
9194 Legion Road
Denton, MD 21629

Prepared by: Alison Taylor

Plan Date: April 2023

Poultry Operation (No Land Plan)

Concentrated Animal Feeding Operation (CAFO)
M.D.E. Agency Interest # 151455

SECTION 1: CNMP Purpose and Agreement

The Comprehensive Nutrient Management Plan (CNMP) is an important part of the conservation management system (CMS) for your Animal Feeding Operation (AFO). This CNMP documents the planning decisions and operation and maintenance for the AFO.

This CNMP is valid as long as there are no major changes to the operation. A plan revision will be needed when the numbers of animals deviates by 10% from the planned amount or when the operation changes from one type of livestock to another. Annual revisions will be necessary for the nutrient management system in order to account for crop changes and soil sample result changes.

This CNMP was developed paying special attention to the USEPA's required nine minimum practices for water quality protection. This plan when implemented by Kris Cohee will ensure clean runoff is diverted from manure storage and production areas and livestock are prevented from making direct contact with waters.

Owner/Operator

As the owner/operator of this CNMP, I, as the decision-maker, I have been involved in the planning process and agree that the items/practices listed in each element of the CNMP are needed. I understand that I am responsible for keeping all necessary records associated with the implementation of this CNMP. It is my intent to implement/accomplish this CNMP in a timely manner as described in the plan.

Kris Cohee — 6-6-24 Date

Certified Comphrensive Nutrient Management Plan (CNMP) Planner

As an approved Comprehensive Nutrient Management Plan (CNMP) Planner, I certify that I have reviewed the Comprehensive Nutrient Management Plan and that the elements of the documents are technically compatible, reasonable and can be implemented.

Alison Taylor — 5/15/24 Date

NRCS Planner Certification # 161

Nutrient Management Certification # 2128

Caroline Soil Conservation District

As the Caroline Soil Conservation District Manager, I certify that I have reviewed this CNMP and concur that the plan meets the Caroline Soil Conservation District's conservation goals.

John Shepard — 5/20/24 Date

SECTION 2: Farmstead (Production Area)

This element addresses the components and activities associated with the production facility, feedlot or animal loafing facilities, manure and wastewater storage and treatment structures and areas, animal mortality facilities, feed and other raw material storage areas, and any areas used to facilitate transfer of manure and wastewater.

Farm Locations

Farm Name	Owner	Tax Account ID	Farm #	Tract #	Account ID Acres	Watershed
Cohee Farm	Kris Cohee	[redacted]	1427	1386	60.5	02-13-03-06-0615

Description of Operation / Additional Information

This is a 4 house poultry farm in Caroline County. The house capacity is 136,000 birds per flock. Mr. Cohee grows Roasters and anticipates 4 flocks per year. The farm is 60.8 acres, the headquarters is 15.3 acres, the cropland 37.6 acres, the remaining 7.9 acres is woodland. The tillable cropland is operated by Alan Garey and is covered in his NMP, therefore this is a no land CNMP. The Environmental Justice Score for this tract is 29.23 percent.

Sensitive Environmental Information

Name of nearest regulatory waterbody	Distance to nearest regulatory waterbody (ft.)	Distance to nearest regulatory wetland (ft.)
Smithville Lake	600 feet	890 feet

Account ID	MD DNR 12 Digit Watershed	Watershed Name	Tier II High Quality Waters Watershed	Impairments			
				Nitrogen	Phosphorus	Bacteria (e.coli, enterocci or fecal)	Sediment
[redacted]	02-13-03-06-0615	Marshyhope Creek	Yes	No	Yes	Yes	No

Animal Production

Poultry

Bird Type	Average Bird Weight (lbs)	Number of Houses	Total Number of Birds (All Houses)	Number of Flocks per year	Manure Generated/Produced (tons/year)*	Manure Available for Utilization/Removed (tons/year)**
Roaster	10	4	136,000	4	1054 tons	610 tons in 2024

* See poultry litter quantity estimation sheets in the "Nutrient Management" section of this plan.

Operators must keep records of the actual:

1. Quantity estimate of litter removed from production and/or storage facility; and
2. Date of removal of litter from production and/or storage facility.

Manure Collection

The Cooperator performs crust outs following 1 flock each year and windrows following the other flocks. A center cut will occur every other year removing 30% of the manure from the houses. A complete cleanout occurred in 2022 and the next total cleanout is expected in 2027.

Manure Storage

Manure that is collected from the poultry houses is stored in the manure shed until it is taken to the receiving farm.

Current / Proposed Manure Storage Conditions

Animal Type	Storage Structure	Size of Storage Structure	Storage Capacity	Date Constructed
Poultry	PWSS	50 X 128	37,587 cu ft	12/26/2017

IMPORTANT! Manure should not be stockpiled or staged anywhere in the production area other than permanent manure storage structure for any length of time.

Transfer Information (Farm(s) receiving exported manure)

Animal Type	Name	Address
	PT Swann	Denton, Maryland 21629
Poultry	Alan Garey	3939 Hopkins Cemetary Road, Felton, Delaware 19943
Poultry	Alan Garey	3939 Hopkins Cemetary Road, Felton, Delaware 19943

Animal Mortality Disposal

Animals die because of disease, injury, or other causes in any confined livestock operation. The mortality rate is generally highest for newborn animals because of their vulnerability.

Catastrophic mortality can occur if an epidemic infects and destroys a large portion of the herd or flock in a short time, or if a natural disaster, such as a flood or excessive heat strikes. There are also incidences when an entire herd or flock must be destroyed to protect human health or other farms in the area.

Methods for managing mortality include:

1. Rendering
2. Composting
3. Incineration*
4. Sanitary landfills
5. Burial**
6. Disposal pits**

* Incineration may only be used with proper equipment and permits must be obtained by the producer.
** Burial and Disposal pits should only be considered for catastrophic mortality if all other methods are not possible. Kris Cohee will follow local and state guidance if it is determined that burial is an acceptable means of disposal.

Typical Mortality Management

Current Normal Mortality Disposal Method(s)

Animal Type	Disposal Method	Number of Bins/Capacity	Location of Disposal/Facility
Poultry	Composting - Bins/Channels	32 ft channel composter	attached to PWSS

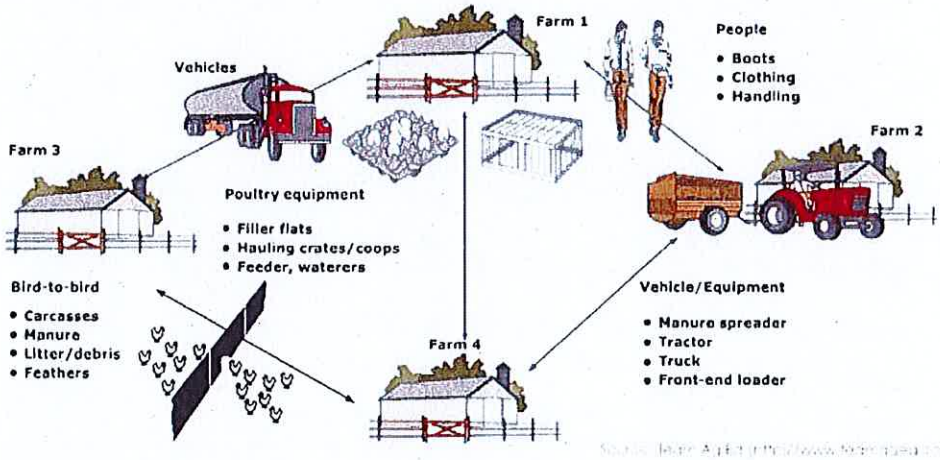
Catastrophic Mortality Management

In the event of catastrophic mortality, the operator will contact the integrator and most likely, follow an 'in house' or 'in PWSS' windrow method of composting.

Biosecurity

Biosecurity means doing everything possible to protect the health of livestock by preventing the transmission of disease. An outbreak of animal disease could not only harm your livestock, it could affect other nearby animals and quickly spread through your area. The economic consequences of a disease outbreak could be devastating. Taking common sense precautions to prevent disease from coming onto your farm is the best investment you can make.

How Diseases Spread (Example - Poultry Operation)



Steps to Take to Avoid Disease Spread

To reduce the risk of introducing disease entering into an animal feeding operation, maintain a biosecurity barrier (physical barrier, personal hygiene, and equipment sanitation) between wildlife, animals, animal containment areas, and other commercial facilities. Some examples of good biosecurity practices include:

1. Permit only essential workers and vehicles on the premises.
2. Give germs the boot
    a. Keep a pair of shoes or boots to wear only around your animals.
    b. Clean and disinfect your shoes often.
    c. Always ask visitors and employees to clean their boots and shoes.
3. Don't haul home disease
    a. Always clean and disinfect vehicles used for moving animals.
    b. Limit traffic of incoming people, products and vehicles that could bring in a disease.
    c. Clean and disinfect all equipment that comes in contact with your animals.
4. Keep your farm secure
    a. Restrict access to your property and animals.

b. Keep doors and gates locked.
c. Have tracking records on animals.
d. Give germs space - Newly acquired animals should be isolated for at least two weeks to ensure you don't introduce disease to your main herd or flock. As an added protection, isolate and quarantine new animals for 30 days before putting them with your other animals. Keep show animals segregated for at least two weeks after they've been to a fair or exhibit.

5. Look for signs
   a. Unusual animal health symptoms or behavior
   b. Sudden, unexplained death loss in the herd or flock
   c. Severe illness affecting a high percentage of animals
   d. Blisters around an animal's mouth, nose, teats or hooves
   e. Staggering, falling or central nervous system disorders that prevent animals from rising or walking normally.
   f. Large number of dead insects, rodents or wildlife
6. Don't wait - call in signs of disease immediately. Do not self-diagnose. Seek veterinary services, as early detection is your best protection. If you have animals with signs of suspect disease, call your local veterinarian, UMD extension agent () or the state veterinarian. Rapid response and investigation are the only ways to control and eliminate disease and stop large numbers of casualties or damage to our economic system.

Farm Contact Information

The following tables contain important contact information specific to this CNMP for Kris Cohee.

Emergency Contact Information

Farm Name	Cohee Farm
Farm Address	8019 Patten Rd., Denton, Maryland 21629
Mailing Address	PO Box 38, Denton, Maryland 21629
Directions to the farm	Traveling East on MD 404, turn left onto Greenwood Rd (rt 16), then make first right onto Patton Rd. Poultry operation is to the immediate left.

Farm Contacts

	Name	Farm Phone	Cell Phone
Farm Owner	Kris Cohee		[redacted]
Farm Operator	Kris Cohee		[redacted]
Fire or Ambulance	911		

State Agency Contacts

	Phone	Emergency
Natural Resources Conservation Service	410-757-0861	410-757-0861
MDA Nutrient Management	410-841-5959	1-800-492-5590
Maryland Department of the Environment	1-800-633-6101	1-866-633-4686
USDA Veterinary Services State Veterinarian	1-866-536-7593	301-854-5699

Caroline County Agency Contacts

	Day Phone	Emergency Number
MDA Regional Nutrient Management (Region)	410-479-1202 x3	410-479-1202 x3
Health Department	410-479-8045	410-479-8045
Sherriff's Office	410-479-2515	911
University of Maryland Extension Office (Denton)	410-479-1202 x3	410-479-1202 x3

Integrator Information

Name	Address	Phone
Mountaire Farms	P.O. Box 1320, Millsboro DE 19966	302-934-1100

CAROLINE COUNTY SERVICE CENTER
9194 LEGION RD
DENTON, MD 21629
(410) 479-1202

Conservation Plan

KRIS COHEE
PO BOX 38
DENTON, MD 21629

OBJECTIVE(S)

This plan is being uodated to complete a new CNMP for the poultry farm.

Install the conservation practices, enhancements, and activities according to the implementation requirements, designs, construction plans, or other documents that facilitate meeting the applicable NRCS technical criteria. If you do not have such information, contact your local office before starting to install your conservation practices, enhancements, and activities

Crop

Tract: 1386

Conservation Crop Rotation (328)

These fields will be farmed in a crop rotation that reduces erosion, improves soil quality, and helps to break up pest cycles. Use a crop rotation of: Corn, Small Grain, Soybeans

Field	Planned Amount	Month	Year	Applied Amount	Date
1	12.2 Ac	05	2016	12.2 Ac	05/24/2016
2	25.4 Ac	05	2016	25.4 Ac	05/24/2016
Total	37.6 Ac	--	--	37.6 Ac	--

Nutrient Management (590)

Apply nutrients in amounts to meet crop need and based on a realistic (5 year average) yield goal. Apply manure and commercial fertilizer according to a nutrient management plan. To obtain this plan, contact a nutrient management consultant at the Cooperative Extension Office (410-479-4030), or contact a private certified consultant.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	12.2 Ac	05	2016	12.2 Ac	05/24/2016
2	25.4 Ac	05	2016	25.4 Ac	05/24/2016
Total:	37.6 Ac	--	--	37.6 Ac	--

Residue and Tillage Management, Reduced Till (345)

Implement a reduced-tillage system to maintain at least 30% surface residue after planting for all crops grown on these fields. Mulch-tillage will help to control erosion, improve water quality, and improve soil organic matter.

Implementation Schedule for Farmstead

This element addresses the need for and implementation of appropriate conservation practices to meet the quality criteria for soil erosion, air and water quality.

Practice and Facility Implementation Schedule

Description	Date
All resource concerns have been addressed and no additional best management practices are recommended or required at this time.	April 2023

The schedule of conservation practices presented here has been reviewed by Kris Cohee, who is responsible for compliance with the requirements of the agricultural farm operation.

I, Kris Cohee, certify that as the decision-maker, I have been involved in the planning process and agree that the items/practices listed in the table above are needed on my farm operation. I understand that I am responsible for implementing these practices according to the scheduled above. Should I not be able to implement any of the above items according to the schedule, I will contact the Caroline Soil Conservation District and have this schedule revised.

Kris Cohee

4-6-24

Date

AFO RESOURCE CONCERNS EVALUATION WORKSHEET

Name:	Kris Cohee			**Agency Interest #:**	151455
Planner:	Alison Taylor			**Farm # / Tract #:**	1427 / 1386
Site Visit Date:	3/10/24			**Total Acres:**	60.5
County:	Caroline			**Production Area Acres:**	15.3
RESOURCE CONCERN		**YES**	**NO**	**Assessment**	
a.	Biosecurity measures	☐	☑	The operator is following biosecurity measures as outlined by the integrator and MDA Animal Health.	
b.	Chemical handling	☐	☑	Chemicals related to poultry production are stored in the appropriate designated storage area.	
c.	Cultural resources	☐	☑	The production area is established and there are no proposed ground disturbance activities scheduled for the area.	
d.	Feedlot area	☐	☑	No feedlot resource concerns have been identified. BMPs have been constructed to mitigate the potential for discharges.	
e.	Floodplains	☐	☑	This is an existing operation and the production area is not located in the FEMA-100 Year Floodplain as per the on-line resources available.	
f.	Gully erosion	☐	☑	No gully erosion was identified in the production area or associated water conveyances.	
g.	Livestock travel lanes	☐	☑	No resource concerns have been identified.	
h.	Nutrient discharge	☐	☑	There are no observable nutrient discharges occurring from the production area.	
i.	Objectionable odors	☐	☑	Normal poultry or livestock odors associated with this the type of operation or facility were noted.	
j.	Particulate matter emissions	☐	☑	Normal particulate emissions associated with a facility of this size.	
k.	Ponding, flooding, seasonal high water table	☐	☑	No abnormal ponding, flooding or high water table issues were identified.	
l.	Sediment	☐	☑	No obvious and observable sediment discharges are occurring from the production area.	
m.	Streambank/shoreline erosion	☐	☑	No streambank or shoreline areas are present in the production area.	
n.	Threatened/endangered species	☐	☑	No geospatial indicators have been identified on the production area.	
o.	Waste storage	☐	☑	There are no resource concerns identified for waste storage. Existing waste storage facilities are adequately sized for the operation and are consistent with the waste management system plan.	
p.	Waterways	☐	☑	No Maryland regulated waterways have been identified on the property.	
q.	Wetlands	☐	☑	No Maryland regulated wetlands have been identified on the property.)	

SECTION 3: Land Treatment Area (Crop and/or Pasture)

This element addresses evaluation and implementation of appropriate conservation practices on sites proposed for land application of manure and organic by-products from an Animal Feeding Operation. On fields where manure and organic by-products are applied as beneficial nutrients, it is essential that runoff and soil erosion be minimized to allow for plant uptake of these nutrients.

This CNMP is considered a "No Land" plan, therefore no additional documents have been included in this section.

Operation and Maintenance for BMP's in Farmstead

This section addresses the operation and maintenance for the structural, non-structural, and land treatment measures for your farm. These documented measures require effort and expenditures throughout the life of the practice to maintain safe conditions and assure proper functioning. Operation includes the administration, management, and performance of non-maintenance actions needed to keep a completed practice safe and functioning as planned. Maintenance includes work to prevent deterioration of practices, repairing damage, or replacement of the practice if one or more components fail.

Waste Storage Facility (313)

• Check backfill areas around the structure (concrete, steel, timber, etc.) frequently for excessive settlement. Determine if the settlement is caused by backfill consolidation, piping, or failure of the structure walls or floor. Necessary repairs must be made.
• Check walls and floors often - minimum of 2 times a year when facility is empty - for cracks and/or separations. Make needed repairs immediately.
• Outlets of foundations and sub-drains should be checked frequently and kept open. The outflow from these drains should be checked when the facility is being used to determine if there is leakage from the storage structure into these drains. Leakage may be detected by the color and smell of the out-flowing liquid, by lush dark-green growth of vegetation around the outlet, by the growth of algae in the surface ditch, or by the vegetation being killed by the out-flowing liquid. If leakage is detected, repairs should be planned and made to prevent the possible contamination of groundwater. To prevent erosion, a good vegetative cover should be established and maintained on berms and embankments. Plantings should be clipped 3 times a year to kill noxious weeds and encourage vigorous growth. If the vegetation is damaged, berms and embankments will need to be re-vegetated as soon as possible.
• Fences should be inspected and maintained in order to exclude livestock from the berms and embankments and to exclude unauthorized entry by people.
• Check the channels and berms of the clean water diversions around the barnyard, buildings and storage structure frequently. Channels must be protected from erosion and berms must be maintained at the proper height to ensure adequate capacity. These channels and berms should not be used as haul roads unless they are designed and constructed for this purpose.
• Check frequently for burrowing animals around buildings, structures, and in the berms and embankments. Remove them when they are found and repair any damage.
• Inspect haul roads and approaches to and from the storage facility frequently to determine the need for stone, gravel or other stabilizing material.
• Do not allow runoff from loading areas and from spills to flow into streams or road ditches.
• Examine and repair all warning and hazard signs as needed.
• Install and maintain a marking gauge post that clearly shows the design levels of one-half and full for manure storage pits, ponds, and lagoons.
• Clear blockages from roof gutters and outlets as needed.
• Notify the Soil Conservation District of any major problems or repairs needed.
• The roof must be maintained to operate as intended for the life of the practice (15 years). The function of the roof is critical because the manure storage facility is sized accordingly.

Animal Mortality Facility (316)

• Facilities for normal mortality will be operated or used on a regular basis. At each operation or use, inspect the facility to note any maintenance needs or indicators of operation problems, and promptly make repairs or adjustments to operation of the facility.
• Follow the management plan requirements for:
• The mix proportions, moisture requirements, and materials used.
• The sizing requirements.
• The timing of the disposal/utilization process including loading, unloading, and turning or aeration of the material.
• Temperature monitoring requirements, including a temperature log.
• What must be done to prevent scavenging animals and leachate problems.
• Bio-security requirements.
• If catastrophic mortality occurs, contact NRCS or the Soil Conservation District for assistance concerning proper disposal of the mortality.

Heavy Use Area Protection (561)

• Inspect the Heavy Use Area at least twice a year and after severe storm events.
• Scrape the surface as needed to remove excess manure and/or sediment.
• Repair paved areas by repairing holes and replacement of paving materials.
• Replace loose surfacing material such as gravel, cinders, sawdust, tanbark, etc. as needed when removed by livestock, equipment traffic, or scraping.
• Repair any deteriorating areas.
• Maintain all vegetation that is part of the plan by fertilizing and liming according to soil test recommendations and reseeding or replanting as necessary.
• Inspect inlets and outlets of pipes and culverts and remove any obstructions present.
• Maintain flow into filter areas by removing accumulated solids, reconstructing waterbars, etc.

SECTION 4: Nutrient Management

This element addresses the [illegible] nutrient management plan [illegible] certified nutrient management consultant.

Soil Sampling and Testing

Maryland Department of Agriculture regulations require up-to-date soil analyses be included in the Nutrient Management Plan. To fulfill this requirement you must follow these guidelines:

1. Soil test(s) are required to be taken every 3 years or sooner for each management unit;
2. It is recommended that soil sampling be conducted consistently at the same time of the year;
3. Soil sampling depth for P and K shall be 8 inches;
4. pH testing sampling depth for no-till is only 4 inches.

Soil testing shall include analysis for any nutrients for which specific information is needed to develop the plan. The minimum analysis for Maryland is to include: pH, organic matter, phosphorus, potassium, calcium, magnesium, and CEC.

Manure and Wastewater Testing/Analysis

Maryland Department of the Environment and the Environmental Protection Agency require an analysis of manure generated on your operation be obtained to meet conditions in a General Discharge Permit for Animal Feeding Operations under CAFO regulations. If you land-apply manure, it is a required component of your NMP according to MDA regulations. To fulfill this requirement you may do one of the following:

1. Collect a sample of manure and obtain an analysis OR
2. If exported, obtain a copy of the manure analysis from one of the farmers who will be receiving the manure from your operation

Manure should be analyzed on an annual basis from each storage structure for: % Solids or % Moisture, Total N, Organic N, NH_4 or NH_3, P_2O_5, K_2O, and pH. These analyses are part of the required Record Keeping and are stored under the Record Keeping element of this CNMP.

Description of Chemical Handling:

1. All chemicals are custom applied and no chemicals are stored at the operation.

TALBOT SOIL CONSERVATION DISTRICT
28577 Marys Court • Suite 3 • Easton, Maryland 21601 410-822-1577 x 5 • http://www.talbotscd.com

NUTRIENT MANAGEMENT PLAN
for
Kris Cohee

Cohee Farm

Mail: PO Box 38, Denton, MD 21629

Farm: 8019 Patten Road, Denton, MD 21629

DESCRIPTION OF OPERATION: This plan is for a no-land poultry operation located in Caroline County. It includes 4 poultry houses with a capacity of 136,000 roasters per flock. Cropland associated with this property is rented by the following operator and must be included in his nutrient management plan: Alan Garey, 3939 Hopkins Cemetary Road, Felton, DE 19943

This nutrient management plan is one of the required plans needed for a CAFO permit 19AF. **It is Mr. Cohee's responsibility to send a copy of this plan to Maryland Department of the Environment (MDE) and Maryland Department of Agriculture Nutrient Management Program (MDA). reference AI ID # : 151455**

DATE OF PLAN: February 26, 2024

DURATION OF PLAN: February 26, 2024-February 25, 2027
An immediate update will be needed if a change in average annual number of **animal units** of 10 percent or greater occurs and if resultant manure production will require significant management adjustments.

MANURE SAMPLING AND TESTING: Maryland Department of the Environment and the Environmental Protection Agency require that CAFO operations have a copy of an analysis of the manure generated on the operation in their records. Operator may either collect a sample of manure before it is transported off-farm and obtain an analysis or obtain a copy of the manure analysis from one of the persons who will be receiving the manure from the operation. A copy of each year's manure analysis must be submitted with each year's Annual Implementation Report (AIR).

MARYLAND NUTRIENT MANAGEMENT PROGRAM

Agricultural Operation Record Keeping Requirements

(January 2003)

The Maryland Nutrient Management Program (MNMP) has developed a new record keeping system, which enables operators to evaluate crop management and nutrient management decisions, and helps consultants make more accurate nutrient recommendations. Included in the new system is a ***Field-By-Field Nutrient Application Record*** form, a ***Grain Yield Calculation*** sheet and a ***Forage Yield Calculation*** sheet.

According to the Water Quality Improvement Act (WQIA) of 1998, the application of nutrients on a farm operation must be documented, and certain records must be maintained by the operator for either 3 or 5 years (See Table 1). It may, at times, be necessary to make these records available to a Maryland Department of Agriculture (MDA) Nutrient Management Specialist when he/she evaluates the implementation of a nutrient management plan.

Table 1.

For 3 years, the following records/plan information must be kept:

- Nutrient management plan prepared by certified consultant
- Receipts for nutrients purchased
- Manure analysis laboratory report and management information (if applicable)
- Soil analysis laboratory report
- Documentation of field-by-field nutrient quantity, rates, timing, type and analysis
- Documentation justifying past revisions or adjustments to the nutrient management plan

For 5 years, the following records must be kept:

- Crop yields and support of crop yield data each year for 5 years

For nurseries or out-of-ground producers, the following records must be kept:

- Description of production cycles and nutrients applied, description of substrate, analysis of organic materials used as a source of nutrients in the substrate, and any monitoring information on run-off testing
- Documented nutrient use for crops without yield goals

In addition to documenting nutrient applications, it is important to document any adjustments to the nutrient management plan. These adjustments include:

- Change in land base
- Change in crops
- Change in nutrient source
- Change in the number of animals
- Change due to manure analysis

Some adjustments are beyond the operator's control, however they still must be documented. These kinds of adjustments include:

- Natural disasters
- Animal mortality or disease
- Economic factors (market changes)
- Weather

Field-by-Field Nutrient Application Record Form

On the new *Field-by-Field Nutrient Application Record* form, operators can easily document the application of nutrients on their farm operations, and account for each farm that they manage on an annual basis. Operators can also keep track of one or more fields that are planted with the same crop and managed similarly.

This form contains two separate areas for recording nutrient applications based on either the same field with different crops in a cropping year or different fields with different crops or management considerations. Each nutrient application can be documented by date, or if the applications are similar, multiple applications can be recorded with several dates on one row.

Other information recorded on this form include the application type (such as chemical fertilizer, animal manure or bio-solids), analysis, rate, total amount applied, method of application and acres applied. Lime application can also be recorded on this form although it is not required by the regulations. Operators can also record any notes specific to the application activity as needed.

Copies of the *Field-by-Field Nutrient Application Record* form can be made by the operator or obtained by contacting the MNMP. Questions regarding this form, record keeping in general or the MNMP can be directed to the county's Extension Agent in Agricultural Science or MDA's Nutrient Management Program at 410-841-5959.

Grain and Forage Yield Calculation Sheets

Two other forms that have been developed by the MNMP are the *Grain Yield Calculation Sheet* and *Forage Yield Calculation Sheet*. These two forms are designed to help operators estimate their crop yields.

Yield information is based on each farm by crop per year. Multiple fields having similar soil characteristics and management for growing a particular crop can be combined to obtain a representative yield. The harvest of a crop can be documented on one or more dates and be based on a similar unit of weight for hay and percent moisture for grain. Once all of the crop harvest information is final, calculations are provided to determine yield estimates.

Grain factors are provided based on information from the University of Maryland Extension and the Penn State Agronomy Guide. On the bottom of each sheet there is a reminder to operators to include determined yields into their nutrient management plan record keeping requirements.

Field-By-Field Nutrient Application Record Form
Definitions

Farm Name: Name of the farm receiving nutrients, lime or pesticides.

Operator: Name of the person who manages the agricultural operation.

Year: The year in which nutrients have been applied.

Field or Field Strips: An area sharing common characteristics, including soil type, nutrient content and plant type or crop produced, such that the nutrients can be recommended and managed in a uniform and consistent manner.

Crop: Primary and/or cover crop grown.

Acres: Total acres representative of the crop grown.

Actual Yield: Crop yield achieved at the time of crop harvest.

Application Date: The date that the nutrient application was made. Any information recorded on the form will be relative to this date.

Nutrient Type: The type of nutrient application such as commercial fertilizer (ammonium nitrate, etc.), animal manure (dairy, beef, etc.), biosolids (lime stabilized, anaerobically digested, etc.), or lime made on the application date. Use additional rows for multiple types of applications on the same date.

Analysis N-P-K: The chemical composition of the applied material as reported by a credited laboratory, or the product label measuring the percentage of nitrogen, phosphorus and potassium.

Application Rate (per acre): Rate of nutrient application measured in wet tons or gallons.

Total Amount Applied: The total quantity of nutrients applied; measured in wet tons or gallons per acre.

Application Method: The method in which the nutrient application is made, such as surface application, surface with incorporation and injection.

Acres Applied: The total number of acres that received the nutrient application.

Notes: Any specific information or occurrences useful for future management of a particular field including notation of variation from NMP recommendations.

FIELD BY FIELD NUTRIENT APPLICATION RECORD

January-03

FARM NAME:_____ OPERATOR:_____

YEAR:_____

FIELD ID/CROPPING INFORMATION:

Field or Field Strips:	Crop:	Acres:	Actual Yield:

Application Types: Fertilizer, Animal Manure, Biosolids, Lime

Application Date	*Nutrient Type*	*Analysis N-P-K*	*Application Rate Per Acre*	*Total Amount Applied*	*Application Method*	*Acres Applied*

Notes:

Field or Field Strips:	Crop:	Acres:	Actual Yield:

Application Types: Fertilizer, Animal Manure, Biosolids, Lime

Application Date	*Nutrient Type*	*Analysis N-P-K*	*Application Rate Per Acre*	*Total Amount Applied*	*Application Method*	*Acres Applied*

Notes:

All records on this sheet, except for time information, is required for Nutrient Management Regulations

GRAIN YIELD CALCULATION SHEET

(April 2001)

Farm: _____ Year: _____

Fld/Mgmt Unit: _____ Crop: _____

Date(s)	Ticket #(s)	% Actual Moisture	Grain Harvested (lbs)	Acres Harvested

% Average Moisture	Total Grain Harvested (lbs)	Total Acres Harvested

GRAIN FACTORS

Crop	Grain Factor (lbs/bu)	% Standard Storage Moisture
Shelled Corn	56	15.5
Ear Corn	70	15.5
Soybeans	60	13
Wheat	60	12.5
Barley	48	12.5
Rye	56	12.5
Oats	32	12.5

Factor is derived from the 1999-2000 Penn State Agronomy Guide
All other factors are derived from the University of Maryland Cooperative Extension (1997)

GRAIN YIELD CALCULATION

(Total Grain Harvested / Grain Factor) X (100 - % Average Moisture) = Total bu/field
(100 - % Standard Storage Moisture)

Total bu/field

Total bu/field = Grain Yield (bu/acre)
Total Acres Harvested

Grain Yield (bu/acre)

IMPORTANT:

Attach all weight tickets and/or receipts to this sheet

All information on this report page needs to be retained for 5 years

Multiple fields should be recorded together as one management unit if similar crop management practices/harvesting were done

Information on calculating yields for corn silage can be obtained from your county Cooperative Extension office

FORAGE YIELD CALCULATION SHEET

(April 2001)

Farm:_____ Year:_____

Field/Mgmt Unit:_____ Crop:_____

Date(s)	Bale Description	Number of Bales	Average Bale Weight (lbs)	Acres Harvested

Total Number of Bales	Total Average Bale Weight (lbs)	Total Acres Harvested

FORAGE YIELD CALCULATION

Total Number of Bales X Total Average Bale Weight = Total lbs Harvested

Total lbs Harvested

Total lbs Harvested ___ = lbs/acre
Total Acres Harvested

lbs/acre

lbs/acre = Forage Yield (tons/acre)
2000 (lbs/ton)

Forage Yield (tons/acre)

IMPORTANT:

Yield information on this calculation sheet must be retained for 5 years
Remember to record all cuttings made on any given field or management unit
Harvesting moisture is assumed to be 12-18% (University of Maryland Cooperative Extension estimate)
Information on calculating yields based on the volume of a storage facility (silo, bunker, agr. Bag) can be obtained from your county Cooperative Extension office
Multiple fields should be recorded together as one management unit if similar crop management practices/harvesting were done

Maryland Nutrient Management Program

Variance for Commercial Fertilizer Nutrient Application

(August 2004)

Occasionally operators may need to group a number of fields within a close level (short range) of soil fertility and prepare a fertilizer blend for each group rather than field specific nutrient recommendation rates developed by the software programs. This guidance document will be used by MDA Nutrient Management Program Specialists during an implementation evaluation to evaluate the degree of variance between planned recommendation rates and actual applied rates for operators using commercial fertilizer sources.

Variance in Nutrient Application Rates for Commercial Fertilizer

Nitrogen:

Total application of commercial nitrogen should not exceed the recommended rate by more than #10/acre. Any rate over the recommended rate or the 10#/acre must be justified and is subject to be in non-compliance.

Phosphorus and Potassium

Recommended rates of commercial phosphorus and potassium can be applied at one rate when the plan recommends various rates for different fields. When using a blended fertilizer material containing phosphorus and potassium, the combined rates **cannot exceed** the phosphorus requirements. The following guidance should be used when evaluating the grouping of recommended nutrient rates.

Phosphorus

Maryland soil test FIV's will be used as a guide for what recommended rates can be grouped at one rate. Any soil test FIV's for phosphorus with the same rating (example: low, medium, optimum) can be managed at one rate. The rate should not exceed the highest recommended rate given in your nutrient management plan for that crop in that soil test range. The rate cannot exceed the upper limit of the nutrient recommended for that crop and yield goal within that soil test range, given in the Maryland Nutrient Management Manual, Section I-B1 and I-B2. (See two examples below)

Example 1: An operator has 3 corn fields with a yield goal of 140 bushel/acre. The three fields all have different rates of phosphorus recommendations from NuMan. Field 1 recommends #30/acre, field 2 recommends #50/acre, and field 3 recommends #0/acre. Any of these three fields with the same soil test FIV rating can be grouped together and applied at one rate , not to exceed the upper limit recommended within the plan for these crops in the given soil test FIV range. Fields 1 & 2 have a recommendation of #30 and #50/acre and have a soil test FIV rating of medium. Therefore fields 1 and 2 can be applied at the same rate, of up to #50 (the highest recommended rate). Field 3's recommendation is #0/acre, with an excessive soil test FIV rating, and cannot be grouped with fields 1 & 2. Field 3 would be allowed a starter fertilizer of up to #30/acre (provided the P-FIV is less than 150 or a P-Site evaluation has been done) however, the operator cannot exceed this rate.

The consultant or person grouping the fields should stay within the lower range when grouping recommendations for one rate when a high range is provided in the manual.

Example 2: An operator again has 3 corn fields with a yield goal of 140 bushel/acre. The three fields all have different rates of phosphorus recommendations from NuMan. Field 1 recommends #120/acre, field 2 recommends #130/acre, and field 3 recommends #70/acre. According to the Maryland Nutrient Management Manual, Section I-B1, these three fields all have the same soil test FIV rating of Low and could be grouped together. However, MDA suggests that the fields be grouped together within the particular range as close to the recommendation as possible. In this case, field 3 should be treated separate from fields 1 and 2 since the FIV range of field 3 is almost half the recommendation of fields 1 and 2. Fields 1 and 2 can be grouped together not to exceed #130/acre.

Potassium Requirement #1

The same guidance of grouping fields together is used for potassium. Any fields with the same soil test FIV ratings for potassium can be managed at one rate. The rate should not exceed the highest recommended rate given in your nutrient management plan for that crop in that soil test range.

Potassium Requirement #2

If the operator has recommended rates of potassium that are lower than what can be achieved because of equipment limitations or product availability, they may apply up to the recommended rates of that crop and the crop to follow (will require a 2 year crop plan). However, the operator must account for the over application with the following crop.

Example: The operator has a recommendation for #30/acre of potassium for their soybean crop, however, they are unable to achieve this rate based on equipment limitations. They plan to follow this crop with wheat/beans which has a recommendation for #60/acre potassium. Therefore the operator may apply up to #90/acre potassium at anytime during that 2 year/2 crop rotation. This is only if the operator has equipment limitation issues. If there are no equipment limitations, the operator will need to follow Requirement No. 1.

All applications of nutrients and any reasoning for exceeding the recommended plan rates must be documented. Any applications that exceed the above guidance are subject to be in non-compliance unless prior approval has been granted by the Department.

Maryland Nutrient Management Program

Variance for Animal Manure Nutrient Application

(August 2004)

Many operators throughout the state apply some form of animal manures to their fields to help meet crop nutrient requirements. Realizing the tremendous variability within organic nutrient sources such as the type of material, nutrient content, composition, along with various other factors such as equipment limitations, application methods and operator judgment, the following guidance was developed. This guidance document will be used by MDA Nutrient Management Program Specialists to evaluate past animal manure nutrient applications during a plan implementation review of a farm.

Variance in Nutrient Application Rates for Animal Manures

Nitrogen-based Plan: 10#/acre maximum allowance for nitrogen application *(per field)*
Operators who have over applied their animal manure based on the organic N recommended rate for any field, and **have not** met their total crop N requirement through the application of animal manure, will need to make the necessary adjustments in their commercial N recommended rate prior to applying commercial N. The total N application (organic and commercial) should not exceed the total recommended N rate for any field in the plan by more than 10#/acre. Any nutrient application over the recommended rate or the 10#/acre allowance must be justified and is subject to be in non-compliance.

Example:
A dairy producer's plan recommends 140 lbs/acre of Nitrogen for a particular field which will be planted in corn. The plan recommends 5,000 gal/acre of liquid dairy manure along with 40 lbs/acre of commercial N to meet the 140 lbs/acre N recommendation for that field. Due to an error in application, the operator actually applied 6,000 gal/acre. Because of this error, the operator will now need to adjust their commercial N application accordingly. Assuming the liquid dairy manure provided 20 lbs of PAN per 1000 gallons, the operator would need to reduce their commercial N application rate to 20 lbs/acre instead of the original 40 lbs/acre.

Nitrogen and Phosphorus-based plan: 10% maximum variance for N and P application *(per field)*
Operators who intend to meet the total crop N requirement in a field through the application of animal manures, or those operations that are applying to fields restricted to a P- based planning rate (FIV 150 or over and P-Site Index completed), should not exceed the total recommended rate by more than 10 percent. Any rate over the recommended rate, or the 10 percent variance, must be justified and is subject to be in non-compliance.

Example:
A poultry producer's plan recommends 140 lbs/acre of Nitrogen for a particular field which will be planted in corn. The plan recommends 3 tons of poultry litter/acre to meet the 140 lbs/acre N recommendation for a field, or is under a P-based plan restriction of 3 tons of litter/acre. The operator will need to keep their total organic nutrient application rate within 10% of the recommended rate. In this scenario, they would be allowed up to 3.3 tons/acre. This variance is given for equipment variability and possible operator error.

All applications of nutrients must follow the guidelines and standards documented in the *Maryland Nutrient Management Manual* Section I - Nutrient Recommendations, D - Timing of Nutrient Application. Any reasoning for exceeding the recommended plan application rates must be documented. Any applications of nutrients that exceed the above guidance are subject to be in non-compliance unless prior approval has been granted by the Department.

Note: This guidance document does not serve as a tool for those operations using biosolids as a nutrient source. The application of biosolids as a crop nutrient source is regulated under the Maryland Department of the Environment sewage sludge regulations. However, MDA does have planning guidance for the application of biosolids in the *Maryland Nutrient Management Manual* Fact Sheet Series # 6 entitled Nutrient Management Planning Guidance for Biosolid Use.

Maryland
Department of Agriculture

Office of Resource Conservation

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Joseph Bartenfelder, Secretary
Mary Ellen Setting, Deputy Secretary

Nutrient Management Program

The Wayne A. Cawley, Jr. Building
50 Harry S. Truman Parkway
Annapolis, Maryland 21401
www.mda.maryland.gov

410 841 5959 D.C. Metro/Washington
410 841 5950 Fax
800 492 5590 Toll Free

Plan Implementation Review Process for Operators

(September 2007, updated September 2015)

This document explains the process of a nutrient management plan implementation review and provides the operator with information about preparing for a review.

Selection Method

Nutrient management specialists either randomly select an operation for a review, arrange a review in response to a complaint, schedule a follow-up to a previous review, and/or to discuss questions /concerns with submitted AIRs or other non-compliance issues.

Notification

Nutrient management specialists notify the selected operator by letter or telephone to schedule a plan implementation review. The letter may propose a given date and time to visit at the operation site. MDA may provide the operator the option to confirm or reschedule the meeting date and/or location for the operator's convenience.

Operator Requirements

A specialist from the MDA nutrient management program will conduct the review. The operator must make available for review the current and two prior years' nutrient management plans and any records associated with these plans. The specialist will randomly select one or more year's worth of plans and associated records, and compare them against nutrient application records and fertilizer receipts. The specialist will examine several fields or management units representative of the operation. P-Site Index calculations and implementation of any resulting best management practices will be verified. Following the review, the specialist will give the operator a copy of the plan implementation evaluation report which will include any necessary follow-up action.

Use these checklists to prepare for your Nutrient Management Plan Implementation Review.

Necessary Records (retain for 3 years):

From All Nutrient Management Plans for the Operation

- ☐ Updated operation information used for required reporting to MDA
- ☐ Operation map or aerial photo
- ☐ Soil analysis results (original lab test results)
- ☐ Manure analysis and management information (if applicable, original lab test results)
- ☐ Summary nutrient recommendations (by field and specific to the crop)
- ☐ Phosphorus Site Index calculations (if applicable)
- ☐ Required Best Management Practices (for P-Site Index only)

From Actual Implementation Records

- ☐ **Nutrient Type(s)** Type of nutrients applied such as fertilizer, animal manure, biosolid, etc.
- ☐ **Analysis/Nutrient content** N-P-K analysis of nutrients applied
- ☐ **Rates & Quantity** Pounds, gallons, or tons applied per acre and total amount applied per total crop acres per timing period
- ☐ **Application Timing & Method** Date(s) applied and method such as banded, sidedress, topdress, etc.
- ☐ **Manure Management Information:** Manure type, date of removal from production and/or storage facility, location stored, where applied, name and location of receiver if moved off-site, and quantity estimate
- ☐ **Actual Yield:** Specific field or management unit yield information for the last 5 years
- ☐ **Applicator voucher or certificate number:** Individual(s) applying or supervising application of nutrients on the operation
- ☐ **Receipts for nutrients purchased:** Receipts for all nutrients purchased and applied (all organic and inorganic sources)

Management Changes and Plan Modifications during Implementation

Management changes or unforeseen circumstance in an agricultural operation may require the operator to modify or update a plan before its expiration. Any revisions to the plan by a certified consultant or certified operator must be justified, documented and included in the records.

Questions?

Contact your local MDA regional office.

REGIONAL OFFICES

Region 1: GARRETT, ALLEGANY, and WASHINGTON COUNTIES
Keith Potter, Nutrient Management Specialist — keith.potter@maryland.gov
Tel: 301-777-1747 (x 116) — Fax: 301-777-7632
12407 Naves Cross Road, N.E., Cumberland, MD 21502

Region 2a: FREDERICK
Moana Himes, Nutrient Management Specialist — moana.himes@maryland.gov
Tel: 301-694-9290 (x136) — Fax: 301-694-5744
92 Thomas Johnson Drive, Suite 110, Frederick, MD 21702

Region 2b: HOWARD and MONTGOMERY COUNTIES
Jessica James, Nutrient Management Specialist — jessica.james@maryland.gov
Tel: 301-694-9290 (x137) — Fax: 301-694-5744
92 Thomas Johnson Drive, Suite 110, Frederick, MD 21702

Region 3a: ANNE ARUNDEL, CARROLL, and PRINCE GEORGE'S COUNTIES
Adam Lyon, Nutrient Management Specialist — adam.lyon@maryland.gov
Tel: 410-841-5949 — Fax: 410-841-5950
50 Harry S. Truman Parkway, Suite 201, Annapolis, MD 21401

Region 3b: CHARLES, CALVERT, and ST. MARY'S COUNTIES
Weylin Anderson, Nutrient Management Specialist — weylin.anderson@maryland.gov
Tel: 301-475-8402 (x 122) — Fax: 301-475-8391
26737 Radio Station Way, Suite B, Leonardtown, MD 20650

Region 4: BALTIMORE, HARFORD, and CECIL COUNTIES
Darren Alles, Nutrient Management Specialist — darren.alles@maryland.gov
Tel: 410-838-6181 (x118) — Fax: Not available at this time
2205 Commerce Road, Suite C, Forest Hill, MD 21050

Region 5a: KENT, QUEEN ANNE'S, and TALBOT COUNTIES
Howard Callahan, Nutrient Management Specialist — howard.callahan@maryland.gov
Tel: 410-822-8126 — Fax: 410-822-8353
28577 Mary's Court, Suite 4, Easton, MD 21601

Region 5b: CAROLINE, and DORCHESTER COUNTIES
Dan Schwaninger, Nutrient Management Specialist — dan.schwaninger@maryland.gov
Tel: 410-822-8120 — Fax: 410-822-8353
28577 Mary's Court, Suite 4, Easton, MD 21601

Region 6: WICOMICO, SOMERSET, and WORCESTER COUNTIES
Steven Dorsey, Nutrient Management Specialist — steve.dorsey@maryland.gov
Tel: 410-677-0802 (x 4) — Fax: 410-543-6660
27722 Nanticoke Road, Unit #2, Salisbury, MD 21801

0315DLF

UNIVERSITY OF MARYLAND EXTENSION
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Agricultural Nutrient Management Program
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College Park, MD 20742
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www.anmp.umd.edu

Nutrient Management Plan Maintenance AND Annual Reporting Requirements (Updated March 2010)

To be in compliance with the State of Maryland Nutrient Management Regulations it is necessary to 1) have a current nutrient management plan that includes recommendations for crops you intend to plant and 2) complete and return an Annual Implementation Report (AIR) form to the Maryland Department of Agriculture (MDA) each March. Farmers are subject to legal action for non-compliance.

Nutrient Management Plan

Nutrient management plans are developed in advance of the cropping season. One of the major components of a nutrient management plan is crop nutrient recommendations. A nutrient recommendation is based on soil test results and expected yield goals for the crop(s) to be planted. The recommendations tell you how much fertilizer and/or manure can be applied to each crop on each field for the time period for which the plan was developed.

Nutrient management plans must be updated at least every three years, and more likely, every year. Consult your nutrient management plan to determine when your plan expires.

Annual Implementation Report

Every year, by March 1st, farmers must submit an Annual Implementation Report (AIR) to MDA. An AIR is a 2-page form requesting information about actual fertilizer and/or manure applications that took place the previous calendar year.

MDA will mail you an AIR form every year in early January. You must summarize the previous year's actual nutrient applications on a crop basis, complete the form, and return it to MDA by March 1st of the year you receive the form. An example of the AIR form is included in your nutrient management plan.

Essential aspects of a nutrient management plan and the AIR are compared in the table below.

Nutrient Management Plan	Annual Implementation Report
developed prior to the cropping season	compiled at the end of the cropping season
includes all crops you plan to grow	reports what crops you actually grew
reflects what nutrients you plan to apply	reports what nutrients you actually applied
only initial plans are submitted to MDA	submitted to MDA every year by March 1st

Contact your Maryland Department of Agriculture Regional Nutrient Management Specialist for more information on submitting your nutrient management plan and AIR.

Poultry Litter Removal Data Collection Sheet

OPERATOR NAME: ______________________ DATE: ______________________

FARM NAME: ______________________

A	B	C	D	E	F	G	H
Date (mm/dd/yr)	Removal From (house or shed)	Load Description*	Load Weight (Tons) **	Number of Loads	Total Removed (D) x (E) = (F) (Tons)	Destination (on-farm shed, on-farm field or if exported; name/address of receiving party)	Quantity Received (if other than total removed)

* Identify type of equipment used to remove waste [illegible]

** If load weight is unknown, calculate it based on the following [illegible]

1) Measure the equipment volume in cu. ft. or bushels

2) Load weight (lbs) = equipment volume [illegible]

3) Load weight (tons) = load weight (lbs) divided by 2,000

[illegible]

UMCP-ANMP 07/09

Poultry Litter Removal Data Collection Sheet

OPERATOR NAME: _____ DATE: _____

FARM NAME: _____

A	B	C	D	E	F	G	H
Date (mm/dd/yr)	Removal From (house or shed)	Load Description*	Load Weight (Tons)**	Number of Loads	Total Removed (D) x (E) = (F) (Tons)	Destination (on-farm shed, on-farm field or if exported; name/address of receiving party)	Quantity Received (if other than total removed)

Poultry Litter Removal Data Collection Sheet

OPERATOR NAME:

DATE:

FARM NAM

A	B	C	D	E		G	H
Date (mm/dd/yr)	Removal From (house or shed)	Load Description*	Load Weight (Tons)**	Number of Loads	Total Removed (D) x (E) = (F) (Tons)	Destination (on-farm shed, on-farm field or if exported; name/address of receiving party)	Quantity Received (if other than total removed)

Poultry Litter Removal Data Collection Sheet

OPERATOR NAME: DATE: _____

FARM NAME: _____

A	B	C	D	E	F	G	H
Date (mm/dd/yr)	Removal From (house or shed)	Load Description*	Load Weight (Tons)**	Number of Loads	Total Removed (D) x (E) = (F) (Tons)	Destination (on-farm shed, on-farm field or if exported; name/address of receiving party)	Quantity Received (if other than total removed)

* Identify type of equipment used to remove waste (i.e. truck, spreader, etc)

** If load weight is unknown, calculate it based on the following estimates: 1 cu ft. litter = 28 lbs; 1 bushel litter = 35 lbs
1) Measure the equipment volume in cu. ft. or bushels
2) Load weight (lbs) = equipment volume in cu. ft. or bushels X lbs per cu. ft. or bushel
3) Load weight (tons) = load weight (lbs) divided by 2,000

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The Agricultural Nutrient Management Program is funded by the Maryland Department of Agriculture.

GENERAL PRINCIPLES OF NUTRIENT MANAGEMENT

UNIVERSITY OF
MARYLAND
EXTENSION
Solutions to your community

Agricultural Nutrient Management Program
Department of Environmental Science and Technology
1145 Cole Student Activities Bldg.
College Park, MD 20742-1038
TEL 301-405-1319
FAX 301-314-7375
www.anmp.umd.edu

General Principles of Nutrient Management

Both farm profitability and water quality can be improved through efficient nutrient use. Manure and biosolids should be considered valuable fertilizer materials and managed in the same manner as commercial fertilizers. Soil testing is very important for the development of nutrient application rates.

Please refer to the appropriate issue of the *Nutrient Manager* (the newsletter of the ***University of Maryland Extension Agricultural Nutrient Management Program***) for more information on soil testing, nitrogen, phosphorus, potassium, sulfur, and pH and liming.

I. Nutrient Recommendations

A) *Nitrogen*:

1) Nitrogen recommendations for many crops are based on yield goals for those crops. It is important to establish realistic yield goals for each field based upon historical yield data (the average yield for the best 3 out of the last 5 years, 6 of 10, etc.).

2) Recommended application rates for nitrogen should not be exceeded.

3) The use of the Pre-Sidedress Nitrogen Test (PSNT) is recommended in the early summer after forage legumes or manure and biosolids applications to corn in order to determine if additional nitrogen is needed.

4) Residual values for nitrogen available from legumes in rotation or previous applications of manure or sludge are deducted from gross nitrogen recommendations.

5) Growing a winter cover crop is a very effective practice for reducing nitrate losses from cropland during a time of the year when leaching potential is high.

B) *Phosphorus and other nutrients*:

1) Recommendations for phosphorus, potassium and micronutrients are based on soil test values, yield goals and crop rotation. When soil test levels are high, additional nutrients, other than an in-row starter fertilizer, are not recommended for most crops.

2) Soil pH influences nutrient availability, particularly phosphorus. Soil pH should be adjusted to the level recommended for the crop to be grown.

II. Recommendations for application of all nutrient sources

A) Proper timing of nutrient applications is important. Apply nutrient sources as close to planting or nutrient demand as possible so that nutrients are taken up by plants quickly and not allowed to runoff into surface water or leach into ground water.

B) Avoid application of nutrient sources to frozen ground and during periods of high potential for leaching and runoff. Application in late fall or winter of any nitrogen source for a spring-planted crop should be avoided whenever possible.

C) Avoid application of nutrient sources to sensitive areas, wetlands, sinkholes, and steep slopes.

D) Calibrate nutrient application equipment accurately to insure that recommended rates are applied. Accurate and uniform applications of nutrients are necessary to maximize the nutrient potential of the fertilizer materials.

III. Recommendations for Manure Applications

A) *Testing*:

1) Manures vary tremendously in nutrient content depending upon animal species, rations, and storage conditions. The nutrient content of manure can be determined through laboratory testing.

2) Whenever possible manure should be sampled at least 6 weeks before planned application to allow time for analysis and plan development.

3) A consistent baseline for nutrient content may be established and based on analyses taken at least twice a year until a uniform value is confirmed, and then every second year thereafter to verify its consistency. If significant changes occur, including feed, management, animals, or storage, new samples should be collected for nutrient analysis.

B) *Application of manure*:

1) Nutrient applications should be made at times of the year that will minimize N and P losses to water and N volatilization loss to the atmosphere. Crop utilization of nutrients in manure and biosolids is maximized if these materials are applied in synchrony with periods of crop uptake. Storage of manure may be necessary to facilitate appropriate timing of nutrient applications.

2) Nitrogen-based applications of manure will cause phosphorus soil test levels to increase over time.

3) Winter application of manure is complicated. See the section on *MDA's Nutrient Application Guidelines*, which has information from Part I-D of the Maryland Nutrient Management Manual for details.

4) Application recommendations for daily haul operations include consideration of slope, crop and vegetative cover.

C) *Storage capacity:*

1) Optimal utilization of nutrients in manure and other nutrient sources is difficult without the ability to store manure for part of the year. Improving storage capacity available will minimize the potential for nutrient loss or runoff and will improve the possibility of proper timing of manure applications.

2) Contact your ***Soil Conservation District*** for advice on design and cost share programs for storage structures if you do not have manure storage capacity or if you need additional storage capacity.

IV. Erosion and Runoff Control

A) *Best Management Practices* should be used to minimize soil erosion and runoff, which can carry nutrients to surface waters. Advice on soil erosion control can be obtained from your ***Soil Conservation District.***

B) *Best Management Practices* around the barnyard area may need to be updated based on current regulations to reduce likelihood of nutrient loss from the area. Consult with your ***Soil Conservation District*** for details.

C) *Phosphorus Site Index*

The addition of any P-bearing material (fertilizer or manure) to fields whose P soil test levels are greater than or equal to FIV 150 will require evaluation of the risk of P movement.

The *Phosphorus Site Index* is a tool that is used to evaluate potential risk for phosphorus movement from agricultural land to surface waters. The *Phosphorus Site Index* includes determination of the limiting nutrient (nitrogen or phosphorus) and may also require additional restrictions of P fertilizer usage.

For a *Phosphorus Site Index* evaluation of your fields or for more information on the *Phosphorus Site Index* contact your Nutrient Management Advisor.

V. Record Keeping

The **Water Quality Improvement Act of 1998** legislation requires producers to keep the following records for at least 3 years (except for #2, crop yields).

1) Nutrient management plans
2) Record of crops planted and actual yield (5 years of records needed in order to determine average)
3) Record of the timing, location and crop acreage of all nutrient applications
4) Analysis of the nutrient content of any fertilizer applied
5) Receipts related to the purchase of nutrients
6) Animal waste generation measurements and estimations
7) Documentation to justify any changes from the nutrient management plan as written

Rev. 10-09

SECTION 5: Additional Documentation

This section is included if there are additional documents needed for the Comprehensive Nutrient Management Plan.

The following documents are located in this section:

- Water Conveyance Map Around Production Area
- Monthly Animal & Mortality Count
- Nutrient Land Application Form
- Weekly Storage Form
- Weekly Wastewater Form
- Manure Litter Storage Form
- Manure Application Form
- Manure Litter Transfer Form
- Daily Waterline Form

Maryland Department of Agriculture
Maryland Agricultural Cost-Share Program (MACS)

CURRENT NUTRIENT MANAGEMENT PLAN CERTIFICATION

Participants of MACS cost-share programs must certify that the agricultural operation associated with the cost-share practice(s) is following a *current* Nutrient Management Plan (NMP), to the extent required by COMAR 15.20.07. This form must be submitted to the local Soil Conservation District (SCD) office *when applying* to the MACS Program.

The SCD shall include a copy of this form with any MACS cost-share application. Applications received without this form, or with a form that is missing information, will be considered incomplete. Exception: This form may be submitted at the claim stage for Manure Transport and Manure Injection projects.

Section I. To be filled out by the Certified Nutrient Management Plan Preparer

Farm Operator Name(s)	Kris Cohee				
Farm Name (if applicable)	Kris Cohee Farm				
Address	PO Box 38				
	Number Street				
	Denton	MD	21629	Caroline	
	City	State	ZIP	County	
Plan Preparer Name	Stephen W. Spielman				
Certification No.	2127	License No. (if applicable)	2413		
Date the NMP was prepared or updated	2/26/2024	Total Acres Under Plan	0		
Period the plan covers: Begin Date	2/26/2024	End Date	2/25/2027		

I certify that the NMP information for the farm operation listed above is true and correct. I understand that if this information has been falsified, my certification and/or license may be revoked.

Signature [signature] Certified NM Consultant or Certified Farm Operator — Date 3/22/2024

Section II. Farm Operator Certification

I certify that: (1) my farm is operating under a current nutrient management plan for the time period indicated above and, (2) my nutrient management plan was developed by the plan preparer named above.

Signature [signature] Farm Operator — Date 4-4-24

Print Name

Section III. Landowner Information

(Fill out this section only if the landowner is applying for cost-share and is ***not*** the agricultural operator of the land)

Landowner Name				
Address				
Number Street				
City	State	ZIP	County	

Poultry Litter Removal Data Collection Sheet

OPERATOR NAME: _____ **DATE:** _____

FARM NAME: _____

A	B	C	D	E	F	G	H
Date (mm/dd/yr)	Removal From (house or shed)	Load Description*	Load Weight (Tons)**	Number of Loads	Total Removed (D) x (E) = (F) (Tons)	Destination (on-farm shed, on-farm field or if exported; name/address of receiving party)	Quantity Received (if other than total removed)

* identify type of equipment used to remove waste (i.e. truck, spreader, etc)

** if load weight is unknown, calculate it based on the following estimates: 1 cu.ft. litter = 28 lbs; 1 bushel litter = 35 lbs

1) Measure the equipment volume in cu. ft. or bushels

2) Load weight (lbs) = equipment volume in cu. ft. or bushels X lbs per cu. ft. or bushel

3) Load weight (tons) = load weight (lbs) divided by 2,000

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07/09

The Agricultural Nutrient Management Program is funded by the Maryland Department of Agriculture.

Manure, Litter, and Wastewater Storage Structures Documentation

Facility Name: _____ NPDES Permit No.: _____

Instructions:
For each storage structure, provide the following information in the table below:

- Structure Type: the type of storage structure (e.g. roofed storage shed, storage pond, anaerobic lagoon…)
- Total Design Storage Volume: the total capacity the storage structure was designed to hold (e.g. 100 ft^3 or 1000 gallons)
- Design Treatment Volume: **(*N/A for dry manure storage)** the treatment capacity the structure was designed to treat
- Days of Storage Capacity: **(*N/A for dry manure storage)** the number of days the structure can accommodate its contents at the rate the operation places waste in it
- Volume for Solids Accumulation: the capacity of the structure available to accumulate solids

Structure Type	**Total Design Storage Volume**	**Design Treatment Volume** (N/A for dry manure storage)	**Days of Storage Capacity** (N/A for dry manure storage)	**Volume for Solids Accumulation**

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Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

Manure Application Equipment Inspection and Calibration Record

Facility Name: _____ NPDES Permit No.: _____

Instructions:
Use this form to keep records of your manure equipment inspections. For each inspection, provide the following information in the table below:

- Inspection/Calibration Date: the date of the inspection/calibration
- Calibration Method: method used for calibration (e.g. weight-area method, load-area method…)
- Inspection/Calibration Results: provide statements such as "recalibrated equipment" or "equipment in calibration"
- Date Calibration Corrected: the date that any observed deficiencies were fixed **must be corrected within 30 days*

Inspection/Calibration Date	Calibration Method	Inspection/Calibration Results	Date Re-Calibrated or Fixed*

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Manure, Litter, and Wastewater Transfer Record Keeping Form

Facility Name: _____ NPDES Permit No.: _____

Use this sheet any time that manure or poultry litter is removed from a production or storage area and transferred to other persons (not under the control of your CAFO). Use additional sheets as necessary.

Date of Transfer (indicate whether import or export)	**Manure Type** (e.g. litter, wastewater)	**Name and Address of Person(s) Received From or Transferred To**	**Quantity Transported** (tons/gallons)

Daily Water Line Inspection Log Sheet

Facility Name: _____ NPDES Permit No.:_____

Instructions:

- Initial the form *each day* after the inspection is complete
- If a leak is detected, place a check in the "leak detected" column

January, 20____		
Day	Initials	√ if Leak Detected
1		
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February, 20____		
Day	Initials	√ if Leak Detected
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MONTHLY ANIMAL & MORTALITY COUNT

Farm Name:	Cohee Farm	Year:	
Operator:	Kris Cohee		

Month	Animal Count and Weight	Mortality	Mortaliy %	Comments

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Department of
the Environment

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Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

Nutrient Land Application Log Sheet

Facility Name: _____ **NPDES Permit No.:** _____

Instructions:
For each land application for each field, provide the following information in the table below:

- Date: the date you applied the manure/litter/process wastewater to the field
- Field ID: the field where you applied manure/litter/process wastewater. Use the same field identification that is used in your nutrient management plan
- Method: how you applied the manure/litter/process wastewater (e.g. surface w/incorporation, surface w/out incorporation, subsurface injection…)
- Application Rate: the number of tons or gallons *actually* applied per acre
- Acres Applied: the number of acres the manure/litter/process wastewater was applied to on the field
- Total N: the total amount of nitrogen you applied to the field from animal waste
- Total P: the total amount of phosphorous you applied to the field from animal waste

Date	Field ID	Method	Actual Application Rate	Acres Applied	Total N	Total P

Date	Field ID	Method	Actual Application Rate	Acres Applied	Total N	Total P

Weather and Soil Condition Documentation

When land applying manure/litter/process wastewater, you also need to document the **weather and soil conditions**. Please provide this information in the following table:

Date	Field ID	Weather Conditions			Soil Conditions
		24 hours before	*During*	*24 hours after*	

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Horacio Tablada Deputy Secretary

Weekly Storage and Containment Structure Inspections Log Sheet

Facility Name: _____ NPDES Permit No.: _____

Instructions:
Use this form to keep records of weekly visual inspections of the structures you use to store or contain manure/litter/process wastewater. Use a separate form for each structure.

**Any deficiencies observed must be corrected within 30 days*

Storage or Containment Structure: _____

	Date	**Initials**	**Depth Marker Reading** (N/A for dry manure handling)	**OK** (√ if no problems)	**Description of any Deficiencies Observed** (put "N/A" if none observed)	**Date Deficiency Corrected***
Week 1						
Week 2						
Week 3						
Week 4						
Week 5						
Week 6						
Week 7						

	Date	Initials	**Depth Marker Reading** (N/A for dry manure handling)	**OK** (√ if no problems)	**Description of any Deficiencies Observed** (put "N/A" if none observed)	**Date Deficiency Corrected***
Week 8						
Week 9						
Week 10						
Week 11						
Week 12						
Week 13						
Week 14						
Week 15						
Week 16						
Week 17						
Week 18						
Week 19						

	Date	Initials	**Depth Marker Reading** (N/A for dry manure handling)	**OK** (√ if no problems)	**Description of any Deficiencies Observed** (put "N/A" if none observed)	**Date Deficiency Corrected***
Week 20						
Week 21						
Week 22						
Week 23						
Week 24						
Week 25						
Week 26						
Week 27						
Week 28						
Week 29						
Week 30						
Week 31						

	Date	Initials	**Depth Marker Reading** (N/A for dry manure handling)	**OK** (√ if no problems)	**Description of any Deficiencies Observed** (put "N/A" if none observed)	**Date Deficiency Corrected***
Week 32						
Week 33						
Week 34						
Week 35						
Week 36						
Week 37						
Week 38						
Week 39						
Week 40						
Week 41						
Week 42						
Week 43						

	Date	Initials	Depth Marker Reading (N/A for dry manure handling)	OK (√ if no problems)	Description of any Deficiencies Observed (put "N/A" if none observed)	Date Deficiency Corrected*
Week 44						
Week 45						
Week 46						
Week 47						
Week 47						
Week 49						
Week 50						
Week 51						
Week 52						

Weekly Wastewater Facilities Inspections Log Sheet

Facility Name: _____ NPDES Permit No.: _____

Instructions:
Use this form to keep records of weekly visual inspections of your wastewater facilities (including pumps, storm water and runoff diversion devices, and devices used to channel contaminated storm water to a wastewater storage or containment structure).

**Any deficiencies observed must be corrected within 30 days*

List the items that need to be inspected below:

_____ _____
_____ _____
_____ _____
_____ _____

	Date	**Initials**	**OK** (√ if no problems)	**Description of any Deficiencies Observed** (put "N/A" if none observed)	**Date Deficiency Corrected***
Week 1					
Week 2					
Week 3					
Week 4					
Week 5					
Week 6					

	Date	**Initials**	**OK** (√ if no problems)	**Description of any Deficiencies Observed** (put "N/A" if none observed)	**Date Deficiency Corrected***
Week 7					
Week 8					
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Week 18					
Week 19					
Week 20					

	Date	Initials	OK (√ if no problems)	Description of any Deficiencies Observed (put "N/A" if none observed)	Date Deficiency Corrected*
Week 21					
Week 22					
Week 23					
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Week 27					
Week 28					
Week 29					
Week 30					
Week 31					
Week 32					
Week 33					
Week 34					

	Date	Initials	OK (√ if no problems)	Description of any Deficiencies Observed (put "N/A" if none observed)	Date Deficiency Corrected*
Week 35					
Week 36					
Week 37					
Week 38					
Week 39					
Week 40					
Week 41					
Week 42					
Week 43					
Week 44					
Week 45					
Week 46					
Week 47					
Week 48					

	Date	Initials	OK (√ if no problems)	Description of any Deficiencies Observed (put "N/A" if none observed)	Date Deficiency Corrected*
Week 49					
Week 50					
Week 51					
Week 52					

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March, 20____		
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April, 20____		
Day	Initials	√ if Leak Detected

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May, 20____

Day	Initials	√ if Leak Detected
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June, 20____

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July, 20____

Day	Initials	√ if Leak Detected
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August, 20____

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September, 20____

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October, 20____		
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November, 20____		
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December, 20____		
Day	Initials	√ if Leak Detected
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TALBOT SOIL CONSERVATION DISTRICT
28577 Marys Court • Suite 3 • Easton, Maryland 21601 410-822-1577 x 5 • http://www.talbotscd.com

NUTRIENT MANAGEMENT PLAN
for
Kris Cohee

Cohee Farm

Mail: PO Box 38, Denton, MD 21629

Farm: 8019 Patten Road, Denton, MD 21629

DESCRIPTION OF OPERATION: This plan is for a no-land poultry operation located in Caroline County. It includes 4 poultry houses with a capacity of 136.000 roasters per flock. Cropland associated with this property is rented by the following operator and must be included in his nutrient management plan: Alan Garey. 3939 Hopkins Cemetary Road. Felton. DE 19943

This nutrient management plan is one of the required plans needed for a CAFO permit 19AF. **It is Mr. Cohee's responsibility to send a copy of this plan to Maryland Department of the Environment (MDE) and Maryland Department of Agriculture Nutrient Management Program (MDA). reference AI ID # : 151455**

DATE OF PLAN: February 26. 2024

DURATION OF PLAN: February 26. 2024-February 25. 2027
An immediate update will be needed if a change in average annual number of **animal units** of 10 percent or greater occurs and if resultant manure production will require significant management adjustments.

MANURE SAMPLING AND TESTING: Maryland Department of the Environment and the Environmental Protection Agency require that CAFO operations have a copy of an analysis of the manure generated on the operation in their records. Operator may either collect a sample of manure before it is transported off-farm and obtain an analysis or obtain a copy of the manure analysis from one of the persons who will be receiving the manure from the operation. A copy of each year's manure analysis must be submitted with each year's Annual Implementation Report (AIR).

SECTION 4: Nutrient Management

This element addresses the Nutrient Management component of the CNMP. The nutrient management plan is developed by a Maryland Department of Agriculture certified nutrient management consultant.

Soil Sampling and Testing

Maryland Department of Agriculture regulations require up-to-date soil analyses be included in the Nutrient Management Plan. To fulfill this requirement you must follow these guidelines:

1. Soil test(s) are required to be taken every 3 years or sooner for each management unit;
2. It is recommended that soil sampling be conducted consistently at the same time of the year;
3. Soil sampling depth for P and K shall be 8 inches;
4. pH testing sampling depth for no-till is only 4 inches.

Soil testing shall include analysis for any nutrients for which specific information is needed to develop the plan. The minimum analysis for Maryland is to include: pH, organic matter, phosphorus, potassium, calcium, magnesium, and CEC.

Manure and Wastewater Testing/Analysis

Maryland Department of the Environment and the Environmental Protection Agency require an analysis of manure generated on your operation be obtained to meet conditions in a General Discharge Permit for Animal Feeding Operations under CAFO regulations. If you land-apply manure, it is a required component of your NMP according to MDA regulations. To fulfill this requirement you may do one of the following:

1. Collect a sample of manure and obtain an analysis OR
2. If exported, obtain a copy of the manure analysis from one of the farmers who will be receiving the manure from your operation

Manure should be analyzed on an annual basis from each storage structure for: % Solids or % Moisture, Total N, Organic N, NH_4 or NH_3, P_2O_5, K_2O, and pH. These analyses are part of the required Record Keeping and are stored under the Record Keeping element of this CNMP.

Description of Chemical Handling:

1. All chemicals are custom applied and no chemicals are stored at the operation.

MANURE MANAGEMENT: Manure that is collected from the poultry houses is stored in the manure shed until it is taken to the receiving farm. This operation includes 1 manure shed with dimensions of 50 ft. x 128 ft., total storage capacity 32,000 cu.ft., and a 32 ft. channel composter.

The operator performs crust outs following 1 flock each year and windrows following the other flocks. A center cut will occur every other year removing 30% of the manure from the houses. A complete cleanout occurred in 2022 and the next total cleanout is expected in 2027

The operator must keep records of the quantity, date, and destination of manure removed from the houses and off the farm. **Manure is exported to the following receiving facility or farm as available:** Alan Garey

3939 Hopkins Cemetary Road

Felton, DE 19943

FIELD STORAGE OF LITTER: Refer to the *General Discharge Permit for Animal Feeding Operations* for information for the requirements for field storage or stacking of litter.

BEST MANAGEMENT PRACTICES: Mr. Cohee must consult either the USDA-Comprehensive Nutrient Management Plan (CNMP) or Soil Conservation Water Quality Plan for this information.

RECORD KEEPING REQUIREMENTS: The Water Quality Improvement Act requires that producers maintain records on manure management, animal numbers, and manure quantity.

The operator must keep records of the quantity, date, and destination of litter as it is removed from the production houses to either storage sheds or off-farm locations. Maryland Department of Agriculture (MDA) requires operators to report this information in their Annual Implementation Report (AIR) due to MDA March 1 each year. The *Litter Removal Data Sheet* in the **Recordkeeping** section of this plan can be used for tracking movement of litter.

Refer to the *General Discharge Permit for Animal Feeding Operations* for information for the type of records that are required by MDE and EPA.

Farm Identification Summary

Farm Name	Tax Account ID Numbers	Watershed Location Code	Total Acres Farmed (Cropland and Pastures)
Cohee Farm	[redacted]	0076	0

Manure Summary Table

Animal Type and Number	Total Manure Generation (tons/yr)*	Manure Avail. for Utilization (tons/yr)*	Manure Storage Capacity/Conditions
136.000 roasters/flock @ 4 flocks/year= 544.000 birds/year	1054	2024-619 2025-27 2026-1058 2027-3459	50 ft. x 128 ft. manure shed. 32 ft. channel composter-total storage capacity 32.000 cu.ft.

*See manure generation sheets

3/22/2024

Stephen W. Spielman
Nutrient Management
Advisor/ Certified Consultant
Certification #: 2127
License #: 2413

UNIVERSITY OF MARYLAND EXTENSION

POULTRY LITTER QUANTITY ESTIMATE

Name: **Kris Cohee** Tract / Farm: **Cohee Farm** Date: **2/26/2024**

Houses included: **4** **Bird type:** **Roaster**

Average Bird Market Weight (lbs): **10**

A.	Years between total cleanouts: Yr. next total cleanout:	**2027**
	- Yr. last total cleanout:	**2022**
	= Years in cleanout cycle:	5
B.	Total # of birds per flock (for all houses on this cleanout cycle):	**136,000**
C.	Flocks per year	**4**
D.	Number of flocks per cleanout cycle (A x C):	20
E.	Estimated tons of cake/crust per 1000 birds per flock: *	**0.2**
F.	Estimated tons of litter + cake/crust per 1000 birds per flock: *	**1.9379**
G.	Tons cake/crust produced per flock (B x E/1000):	27
H.	Tons cake/crust produced per cycle (G x D)	544
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):	5,271
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):	4,727
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):	945
L	Tons of litter + cake/crust produced per year (I/A)	1,054

* 2007 Delmarva Poultry Litter Production Estimates, George W. Malone, University of Delaware. Georgetown Delaware

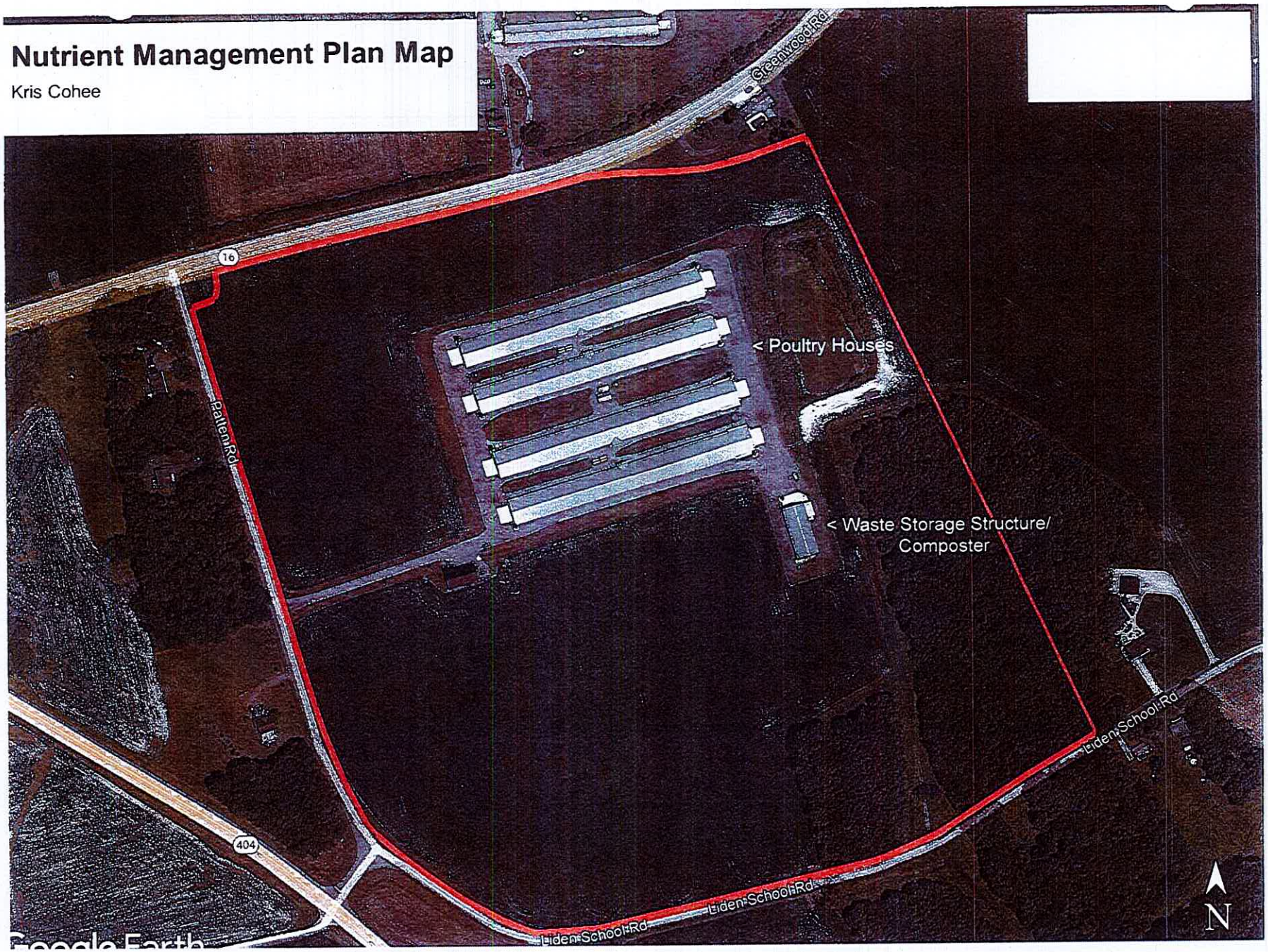
Quantity of Poultry Litter, Cake/Crust Available per Year

Year	M Tons of litter remaining in the house from last year (N-P) + (R-S) (previous year)	N Total tons of litter present in the house this year (K) + (M, this year)	O % of partial or total litter to be removed this year in excess of cakeout/crustout (enter % of N removed)	P Tons of litter removed this year (N x O)/100	Q Flocks this Year	R *** Tons Cake/Crust Produced this Year (Q x G)	S Tons Cake/Crust removed this Year	T Tons litte cake/cru remove this yea (P + S)
2023	0	945	**0**	0	4	109	27	27
2024	1,027	1,973	**30**	592	4	109	27	619
2025	1,463	2,408	**0**	0	4	109	27	27
2026	2,490	3,435	**30**	1,031	4	109	27	1,058
2027	2,486	3,432	**100**	3,432	4	109	27	3,459
				5,054	20	544	135	5,189

*** Cake/Crust not removed due to windrowing, is added with the litter remaining in the house the following year. Windrowing may likely result in actual quantities of litter being less than the estimates shown here. The actual amount of Cake/Crust removed may also be less than the estimated amounts produced due to improved drinker systems, ventilation, etc.

Nutrient Management Plan Map

Kris Cohee



CAROLINE COUNTY SERVICE CENTER
9194 LEGION RD
DENTON, MD 21629
(410) 479-1202

Conservation Plan

KRIS COHEE
PO BOX 38
DENTON, MD 21629

OBJECTIVE(S)

This plan is being updated to complete a new CNMP for the poultry farm.

Install the conservation practices, enhancements, and activities according to the implementation requirements, designs, construction plans, or other documents that facilitate meeting the applicable NRCS technical criteria. If you do not have such information, contact your local office before starting to install your conservation practices, enhancements, and activities

Crop

Tract: 1386

Conservation Crop Rotation (328)

These fields will be farmed in a crop rotation that reduces erosion, improves soil quality, and helps to break up pest cycles Use a crop rotation of: Corn, Small Grain, Soybeans

Field	Planned Amount	Month	Year	Applied Amount	Date
1	12.2 Ac	05	2016	12.2 Ac	05/24/2016
2	25.4 Ac	05	2016	25.4 Ac	05/24/2016
Total:	37.6 Ac	--	--	37.6 Ac	--

Nutrient Management (590)

Apply nutrients in amounts to meet crop need and based on a realistic (5 year average) yield goal Apply manure and commercial fertilizer according to a nutrient management plan To obtain this plan, contact a nutrient management consultant at the Cooperative Extension Office (410-479-4030), or contact a private certified consultant.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	12.2 Ac	05	2016	12.2 Ac	05/24/2016
2	25.4 Ac	05	2016	25.4 Ac	05/24/2016
Total:	37.6 Ac	--	--	37.6 Ac	--

Residue and Tillage Management, Reduced Till (345)

Implement a reduced-tillage system to maintain at least 30% surface residue after planting for all crops grown on these fields. Mulch-tillage will help to control erosion, improve water quality, and improve soil organic matter.

Farm Contact Information

The following tables contain important contact information specific to this CNMP for Kris Cohee.

Emergency Contact Information

Farm Name	Cohee Farm
Farm Address	8019 Patten Rd., Denton, Maryland 21629
Mailing Address	PO Box 38, Denton, Maryland 21629
Directions to the farm	Traveling East on MD 404, turn left onto Greenwood Rd (rt 16), then make first right onto Patton Rd. Poultry operation is to the immediate left.

Farm Contacts

	Name	Farm Phone	Cell Phone
Farm Owner	Kris Cohee		[redacted]
Farm Operator	Kris Cohee		[redacted]
Fire or Ambulance	911		

State Agency Contacts

	Phone	Emergency
Natural Resources Conservation Service	410-757-0861	410-757-0861
MDA Nutrient Management	410-841-5959	1-800-492-5590
Maryland Department of the Environment	1-800-633-6101	1-866-633-4686
USDA Veterinary Services State Veterinarian	1-866-536-7593	301-854-5699

Caroline County Agency Contacts

	Day Phone	Emergency Number
MDA Regional Nutrient Management (Region)	410-479-1202 x3	410-479-1202 x3
Health Department	410-479-8045	410-479-8045
Sherriff's Office	410-479-2515	911
University of Maryland Extension Office (Denton)	410-479-1202 x3	410-479-1202 x3

Integrator Information

Name	Address	Phone
Mountaire Farms	P.O. Box 1320, Millsboro DE 19966	302-934-1100

Field	Planned Amount	Month	Year	Applied Amount	Date
1	12.2 Ac	05	2016	12.2 Ac	05/24/2016
2	25.4 Ac	05	2016	25.4 Ac	05/24/2016
Total:	37.6 Ac	--	--	37.6 Ac	--

Farmstead

Tract: 1386

Animal Mortality Facility (316)

Construct a dead bird composting facility for the economical and environmentally safe disposal of dead poultry. The structure shall be built according to NRCS standards and specifications and maintained as described in the Operation and Maintenance plan. A 32 ft attached channel composter is planned with MACS cost share (agreement #).

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1.00 No	03	2017	1.00 No	12/26/2017
Total:	1.00 No	--	--	1.00 No	--

Heavy Use Area Protection (561)

Stabilization - Stabilize or protect an intensively used area.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	3200.00 SqFt	09	2018	--	--
Total:	3200.00 SqFt	--	--	--	--

Heavy Use Area Protection (561)

Construct a Heavy Use Area (HUA) at the load-out doors of the poultry house and the end of the PWSS and DBCF. The Heavy Use Area will reduce erosion and improve water quality by providing a stable area for handling manure during partial or total cleanout. Follow the NRCS engineering design provided and the required Operation and Maintenance plan. Pads on the PWSS, DBCF, all four "A" ends, and house 3 and house 4 "B" ends will be applied for under MACS cost-share. The pads on houses 1 and 2 "B" ends may be applied for under EQIP.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	11428.00 SqFt	03	2017	11389.00 SqFt	12/29/2017
Total:	11428.00 SqFt	--	--	11389.00 SqFt	--

Waste Storage Facility (313)

Construct a waste storage structure according to NRCS standards and specifications at the location as shown on the conservation plan map. Structure is designed to safely store manure until it is safe to apply to the land in accordance with the waste management plan. Follow proper operation and maintenance techniques as specified in the plan. A 50 X 128 ft PWSS is planned with MACS cost share (agreement #).

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1.00 No	03	2017	1.00 No	12/26/2017
Total:	1.00 No	--	--	1.00 No	--

Windbreak/Shelterbelt Establishment and Renovation (380)

Plant single or multiple rows of trees or shrubs.

A [3] row tree windbreak/shelterbelt will be established as indicated on the site plans.

See the windbreak planting plan for species, spacing, planting period, and maintenance

Cost share for EQIP can be applied for.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	2020.00 Ft	04	2018	--	--
Total:	2020.00 Ft	--	--	--	--

CERTIFICATION OF PARTICIPANTS

KRIS COHEE — DATE 6-6-24

CERTIFICATION OF:

CERTIFIED PLANNER — DATE 5/15/24

CONSERVATION DISTRICT

CAROLINE SCD — DATE 5/20/24

PUBLIC BURDEN STATEMENT

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collections is 0578-0013. The time required to complete this information collection is estimated to average 45/0.75 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information.

PRIVACY ACT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C 522a). Furnishing this information is voluntary; however failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other state or federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

USDA NON-DISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers. If you believe you experienced discrimination when obtaining services from USDA, participating in a USDA program, or participating in a program that receives financial assistance from USDA, you may file a complaint with USDA. Information about how to file a discrimination complaint is available from the Office of the Assistant Secretary for Civil Rights. USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, complete, sign, and mail a program discrimination complaint form, available at any USDA office location or online at www ascr.usda gov, or write to:

USDA Office of the Assistant Secretary for Civil Rights

1400 Independence Avenue, SW.

Washington, DC 20250-9410

Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender. Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

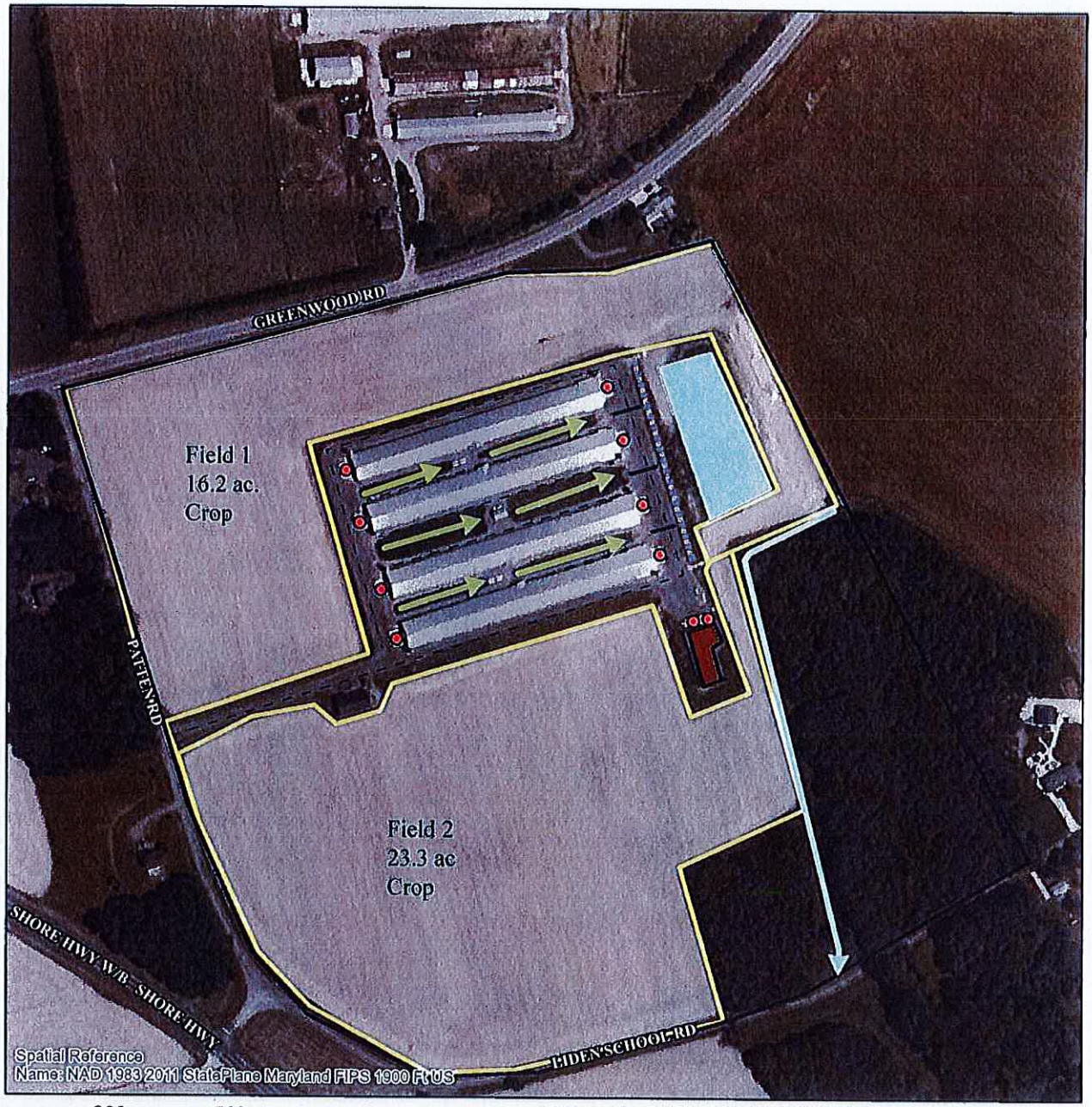
Conservation Plan Map

Date 5/3/2024

Client(s) Kris Cohee
Opid MHSMU-26
Farm 1427 Tract 1386
Approximate Acres 60 6 acres

Assisted By Alison Taylor

CAROLINE CONSERVATION DISTRICT



0 280 560 Ft

Location of Map Center 75°45'24"W 38°49'41"N

Fd. 1 & 2 328,345 &590, previously applied.

USDA

- Approximate Property Boundaries
- Field Boundaries
- Surface Drainage
- Grassed Swales
- Farm Lane
- Forebay
- Stormwater/Sediment Pond
- Pipe
- 50 x 128 PWSS & 32' Channel DBCF NW-2017-2472
- HUA Pads NW-2017-2473B

Prepared with assistance from USDA-Natural Resources Conservation Service

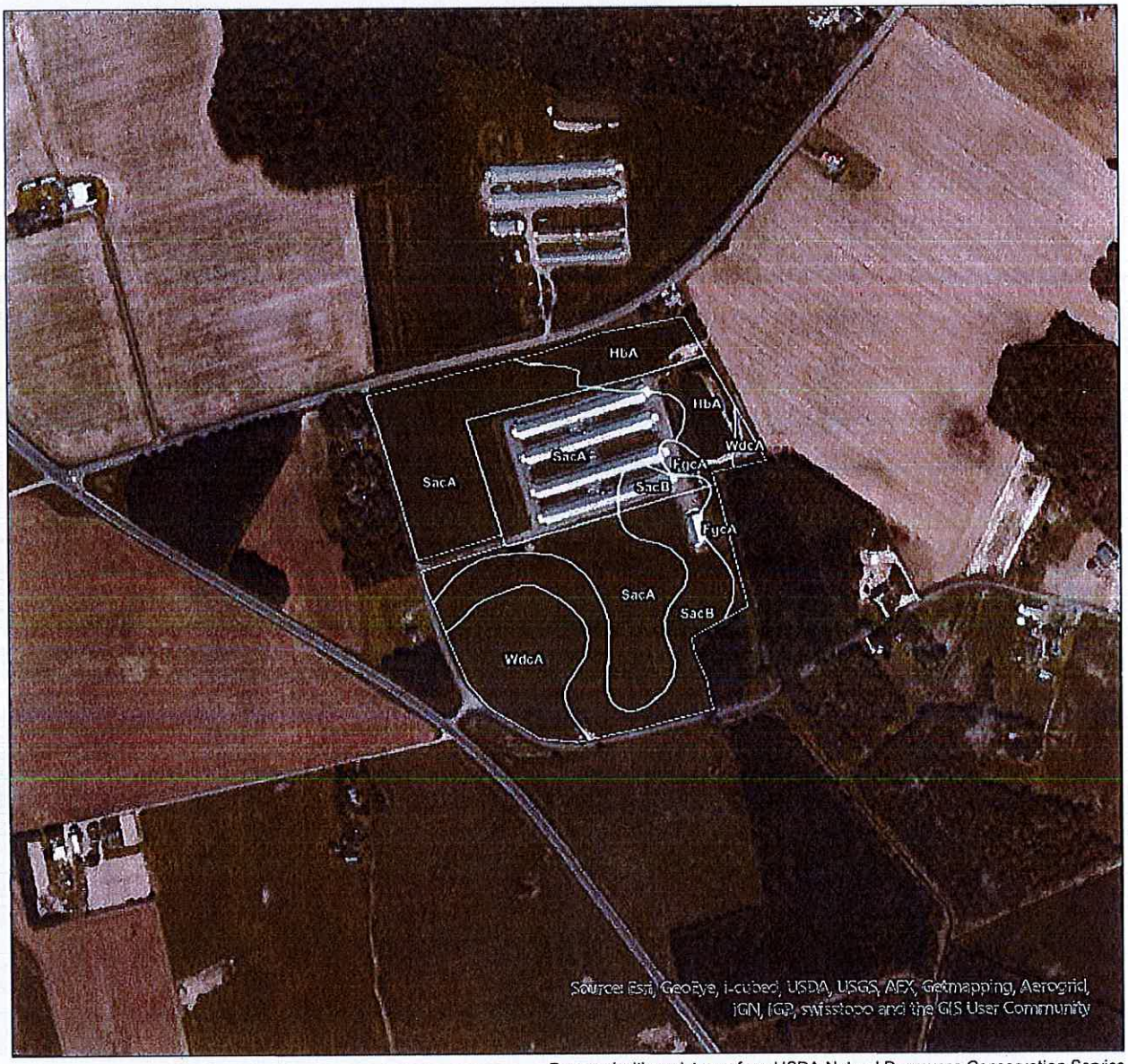
Date: 5/15/2024

Soils Map and Report

Client(s): KRIS COHEE
Caroline County, Maryland
Approximate Acres: 60.8

Assisted By: Alison Taylor

Land Units: Tract 1386, Fields 1,2,HQ



Prepared with assistance from USDA-Natural Resources Conservation Service

0 660
Feet

Soils

Soil Mapunit

USDA

U S DEPARTMENT OF AGRICULTURE — NATURAL RESOURCES CONSERVATION SERVICE

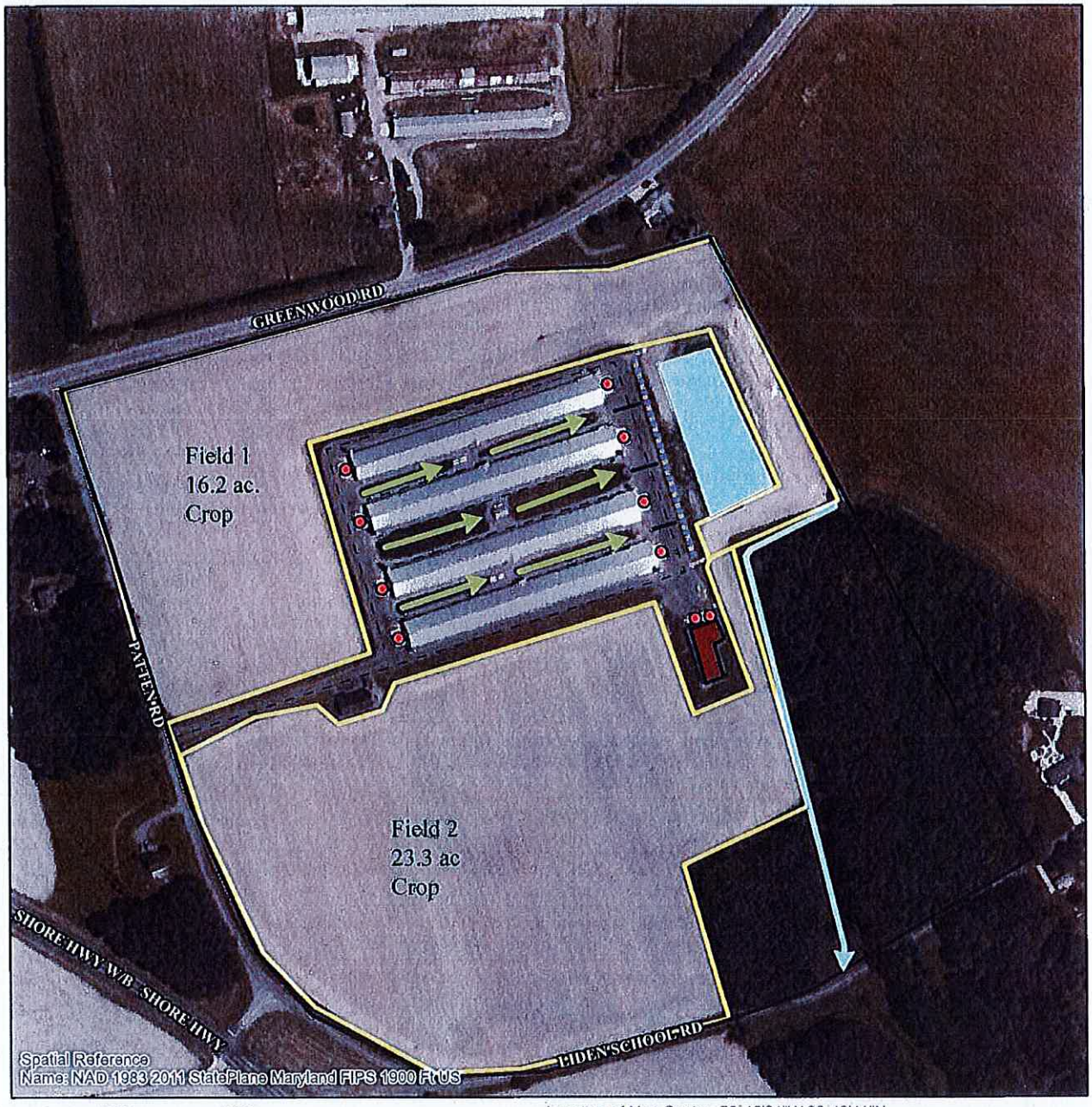
Conservation Plan Map

Date: 5/3/2024

Client(s). Kris Cohee
Opid MHSMU-26
Farm 1427 Tract 1386
Approximate Acres 60 6 acres

Assisted By: Alison Taylor

CAROLINE CONSERVATION DISTRICT



0 280 560 Ft

Location of Map Center: 75°45'24"W 38°49'41"N

Fd. 1 & 2 328,345 &590, previously applied.

USDA

- Approximate Property Boundaries
- Field Boundaries
- Surface Drainage
- Grassed Swales
- Farm Lane
- Forebay
- Stormwater/Sediment Pond
- Pipe
- 50 x 128 PWSS & 32' Channel DBCF NW-2017-2472
- HUA Pads NW-2017-2473B

Prepared with assistance from USDA-Natural Resources Conservation Service

MDE SELF INSPECTION AND RECORDKEEPING REQUIREMENTS FOR LAND & NO-LAND OPERATIONS

Type	Maintain Records of:	Frequency	Applicable to Liquid/Dry Manure Handling or Both
Land & No-Land	Any transfers of manure, litter, and process wastewater, will include the following information: 1.) Name and address of recipient and 2.) Date and quantity transferred. The permittee shall supply the recipient of the animal waste with the most recent annual nutrient analysis of the manure, litter, or process wastewater. If the recipient performs the analysis, the permittee shall obtain a copy and maintain it as part of the permittee's records.	Each occurrence	Both
Land	Each application event where manure, litter, or process wastewater is applied. Including 1.) Fields where animal waste is distributed, using field names consistent with those in the required plan, 2.) Application method, rate, time and date, 3.) Soil conditions, including instances of ponding or runoff, saturated soil, and frozen ground or snow covered ground and 4.) Weather conditions, including precipitation and temperature at the time of application and precipitation 24 hours prior to, and following, application.	Each land application event	Both
No-Land	Manure samples shall include the following information, 1.) Date sample taken, 2.) Test methods used to sample and analyze manure, litter, and process wastewater; and 3.) Results from manure, litter, and process wastewater sampling.	Annually	Both
Land & No-Land	Mortality disposal including date, numbers of animals, and method of disposal	As necessary	Both
Land & No-Land	Inspections conducted, including date, of the animal waste storage areas	Weekly	Both
Land	The results of manure samples and soil samples, including the following information, 1.) Date sample taken, 2.) Test methods used to sample and analyze manure, litter, process wastewater, and soil, 3.) Results from manure, litter, process wastewater, and soil sampling and 4.) Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.	Annually for manure samples, at least once every three years for soil samples	Both
Land	Manure application equipment inspections, including the following information, 1.) Date inspection conducted and 2.) Calibration date; and iii. Maintenance of equipment used for manure application.	At least annually	Both
Land & No-Land	Inspections, including date, of the storm water routing structures	Weekly	Both
Land & No-Land	Inspections, including date, for all indoor and outdoor water lines, including drinking or cooling water lines	Daily	Both
Land & No-Land	The depth of manure and process wastewater, including date of reading, as indicated by the depth marker in all liquid animal waste impoundments	Weekly	Liquid
Land & No-Land	Inspections, including date, of all wastewater operations and pumps	Weekly	Liquid
Land & No-Land	All manure, litter, and wastewater storage structures including the following information, 1.) Date inspection conducted, 2.) Volume for solids accumulation, 3.) Design treatment volume, 4.) Total design storage volume, 5.) Days of storage capacity and 6.) Structural stability inspection of all earthen embankment structures.	As necessary	Liquid
Land & No-Land	Any additional self – inspection and recordkeeping activities required by this General Permit	As necessary	Both

Self-Inspection and Recordkeeping for CAFOs/MAFOs that DO NOT Land Apply (No-Land Operations):
The permittee that transports all and/or some of its manure, litter, or process wastewater to an area that is not under the control of the owner or operator of the no-land operation shall maintain no-land operation records on-site for five years. The records shall be available for inspection by the Maryland Department of the Environment personnel upon request. The record shall also include a notation of periods when the facility is not in operation (out of production).

NUTRIENT APPLICATION REQUIREMENTS

Source: Maryland Department of Agriculture 2012
Regulatory Citation: COMAR 15.20.07.02

I. GENERAL GUIDELINES

A. This document addresses (1) **Setbacks for Nutrient Application**, (2) **Application Timing for all nutrients, organic and chemical**, and (3) **Temporary Field Stockpiling (staging) of Organic Materials**. Application of nutrients may vary depending on the crop, season, nutrient source, and weather conditions. A person applying nutrients shall use best management practices, including following these "Nutrient Application Requirements," to maximize plant utilization efficiency as described in Section I-B of the *Maryland Nutrient Management Manual*, and minimize the potential for nutrient movement to sensitive areas and losses to surrounding water bodies, including surface and groundwater.

B. This document does not supersede Maryland Department of the Environment Animal Feeding Operations regulations in COMAR 26.08.01 and 26.08.03.09, or the Maryland Department of the Environment Sewage Sludge Management regulations in COMAR 26.04.06 regarding the requirements for sewage sludge storage, buffer zones, and the incorporation of sewage sludge into the soil by the end of each working day.

C. All materials that provide primary crop nutrients shall be included in, and managed by, a Nutrient Management Plan. These materials include chemical fertilizer, organic materials such as animal manure, sewage sludge, food processing wastes/residuals, spray irrigation from wastewater treatment plants, other waste streams containing nutrients, and soil conditioners/amendments.

D. These Nutrient Application Requirements shall be followed by certified consultants in the development of nutrient management plans, and by operators and applicators during plan implementation in order to comply with COMAR 15.20.08.05G, H and I

II. SETBACKS FOR NUTRIENT APPLICATION

A. "Nutrient Application Setback" means a vegetated area of a prescribed width where nutrient-containing material may not be applied, as measured from the edge of surface water, including perennial and intermittent streams. An intermittent stream means a stream or the reach of a stream that is below the local water table for at least some part of the year, and obtains its flow from both surface runoff and ground water discharge. Surface water does not include:

MDA'S NUTRIENT APPLICATION GUIDELINES

1. Ephemeral streams (defined as streams which flow only in direct response to precipitation in the immediate watershed and which have a channel bottom that is always above the local water table);
2. Irrigation and treatment ditches, as defined under "waters" in COMAR 15.20.08.03(B)(39), and
3. Field ditches, which, for purposes of this exception, are defined as channelized waterways that, as provided in the USDA-NRCS National Cooperative Soil Survey, are not within:
    a. A floodplain soil mapping unit;
    b. A hydric soil unit and mapped as a narrow, elongated feature in a fluvial/floodplain position; or
    c. A soil mapping unit that has a "B" slope class or steeper.

B. Effective January 1, 2014, a person who uses nutrients shall implement the following nutrient application setback requirements:
1. An application of crop nutrients using a broadcast method (*e.g.*, spinners, splashers) either with or without incorporation requires a 35-foot setback.
2. A directed spray application or the injection of crop nutrients requires a 10-foot setback.
3. Excepting perennial forage crops grown for hay or pasture, vegetation in the 10-foot setback area may not include plants that would be considered part of the crop grown in the field.
4. Pastures and hayfields are subject to a 10-foot nutrient application setback.
5. Nutrients may not be applied mechanically within the setback. Except as provided in subsection II.B.6, livestock shall be excluded from the setback to prevent direct deposition of nutrients within the setback.
6. As an alternative to fencing livestock from the setback area, a person shall work with the soil conservation district to develop and implement a Soil Conservation and Water Quality Plan. The plan shall include Best Management Practices (BMPs) such as stream crossings, alternative watering facilities, pasture management or other MDA-approved BMPs that are considered to be equally protective of water quality and stream health.
7. As an alternative to a nutrient application setback, MDA may approve other BMPs that it finds equally protective of water quality and stream health. Alternative BMPs may be approved based on established USDA, NRCS practice standards or research and demonstration by the University of Maryland, College of Agriculture and Natural Resources or other land grant university establishing the effectiveness of these practices.
8. Sacrifice lots (less than 75% grass or grass legume mix) shall maintain a 35-foot setback.

C. Operators are responsible for sediment and erosion control of stream crossing areas. Operators shall move livestock from one side of the stream to the other side only through stream crossings designed to prevent erosion and sediment loss. Operators shall gate crossing areas wider than 12 feet. Operators may allow livestock controlled access to streams for watering in accordance with USDA-NRCS Field Office Technical Guide standards and specifications.

III. APPLICATION TIMING

A. The consultant, applicator, operator, and the certified farm operator shall comply with the following management requirements when recommending or applying nutrients throughout the year. These requirements separately address the use of (1) chemical fertilizers and (2) organic fertilizers. An organic fertilizer is derived from either a plant or animal product, and contains carbon, and one or more elements other than hydrogen and oxygen that are essential for plant growth. The consultant, applicator, operator, and certified farm operator shall follow the nutrient application recommendations for crops as specified in the *Maryland Nutrient Management Manual* Section I-B. Nutrients shall be applied as close to plant nutrient uptake period as possible.

B. Spring and Summer (March 1 through September 9)

1. A person may make a nutrient application during the spring-summer time period for an existing crop or a crop to be planted either during this time period or in the fall provided that, for each such crop, the rates and applications are made in accordance with recommendations found in Section I-B of the *Maryland Nutrient Management Manual.*
2. Except as provided in subsection III.B.3, organic nutrient sources shall be injected or incorporated as soon as possible, but no later than 48 hours after application.
3. If any of the following conditions exist, the material is not required to be injected or incorporated:
    a. Livestock manures deposited directly by animals;
    b. Permanent pastures;
    c. Land used for hay production;
    d. Fields containing highly erodible land as defined by USDA-NRCS in its Field Office Technical Guide;
    e. Fields in which a current soil conservation and water quality plan or a current USDA/NRCS program requirement prohibits or otherwise restricts soil disturbance; or
    f. Land where nutrients are applied to a growing crop through a spray irrigation system.

C. Fall Application

1. Term Defined.

In this regulation, the term "fall application" means:

a. For the years 2012 through 2015, nutrients applied from September 10 through November 15; and
b. After July 1, 2016, nutrients applied:
    (i) For Maryland in counties east of the Chesapeake Bay and the Susquehanna River, from September 10 through November 1; and

(ii) For Maryland in counties west of the Chesapeake Bay and the Susquehanna River, from September 10 through November 15.

2. Chemical Fertilizers

A person may make a fall application of a chemical fertilizer for an existing crop or a crop to be planted during this time period provided that, for each such crop, the rates and applications are made in accordance with recommendations found in Section I-B of the *Maryland Nutrient Management Manual.*

3. Organic Fertilizers

a. General Rules for Fall Application of Organic Sources

(i) Excepting poultry litter, a person may make a fall application of an organic nutrient source for an existing crop or a crop to be planted either during this time period or the following spring (before June 1) provided that, for each such crop, the rates and applications are made in accordance with paragraph III.C.3.(b) of this subsection and the recommendations found in Section I-B of the *Maryland Nutrient Management Manual.*

(ii) A person may make a fall application of poultry litter for an existing crop or a crop to be planted during this time period provided that, for each such crop, the rates and applications are made in accordance with paragraph III.C.3.(b) of this subsection and the recommendations found in Section I-B of the *Maryland Nutrient Management Manual.*

b. General Conditions Relating to the Fall Application of Organic Nutrient Sources

(i) Except as provided in subparagraph III.C.3.b.(ii), if a person makes a fall application of an organic nutrient source, the person shall incorporate or inject the material. If the material is not injected, it shall be incorporated as soon as possible, but no later than 48 hours after application.

(ii) If any of the following conditions exist, the material is not required to be injected or incorporated:

(aa) Livestock manures deposited directly by animals;

(bb) Permanent pastures;

(cc) Land used for hay production;

(dd) Fields containing highly erodible land as defined by USDA-NRCS in its Field Office Technical Guide;

(ee) Fields in which a current soil conservation and water quality plan or a current USDA/NRCS program requirement prohibits or otherwise restricts soil disturbance; or

(ff) Land where nutrients are applied to a growing crop through a spray irrigation system.

(iii) A person may make a fall-application on pasture land, hay-land or other acreage under vegetative cover.

(iv) A person making a fall-application of an organic nutrient source to fallow cropland shall plant a cover crop as soon as possible after application. The cover crop planting shall occur:

(aa) No later than November 15; and

(bb) After July 1, 2016, in counties east of the Chesapeake Bay and Susquehanna River, no later than November 5.

(v) The rate of nutrient application shall be determined based on recommendations outlined in Section I-B of the *Maryland Nutrient Management Manual* using either nitrogen or phosphorus-based criteria.

(vi) If the application is phosphorus-based, the phosphorus application rate:

(aa) For a fall-seeded crop, shall be based on the phosphorus recommendations for that crop;

(bb) For crops to be planted the following spring (no later than June 1), may not exceed the one year crop removal rate of phosphorus for the spring-planted crop;

(cc) Shall follow the provisions of the Phosphorus Site Index, as they may otherwise apply; and

(dd) Shall result in an application rate of plant available nitrogen not exceeding 50 lbs. per acre.

(vii) If the application is nitrogen-based, the rate of application for a fall-seeded crop shall be based on recommendations for plant available nitrogen as outlined in Section I-B of the *Maryland Nutrient Management Manual*. If the application is related to a crop that is to be planted the following spring (before June 1), the application of nitrogen may not exceed:

(aa) 50% of the plant available nitrogen recommended for the crop; and

(bb) 50 lbs. of plant available nitrogen per acre.

4. Emergency Situations

Applications required in emergency situations such as imminent overflow of a storage facility shall be managed in consultation with the Maryland Department of Agriculture. Operators in such situations shall contact the MDA regional nutrient management representative for guidance.

D. Winter Application

1. Term Defined.

In this regulation, the term "winter application" means:

a. For the years 2012 through 2015, nutrients applied from November 16 through February 28 of the following year; and

b. After July 1, 2016, nutrients applied:

(i) For Maryland counties east of the Chesapeake Bay and the Susquehanna River, from November 2 through February 28 of the following year; and

(ii) For Maryland counties west of the Chesapeake Bay and the Susquehanna River, from November 16 through February 28 of the following year.

2. Chemical Fertilizer

As a general rule, a person may not make a winter application of a chemical fertilizer to cropland. However, for small grains and perennial forage crops, a person may apply nitrogen at green-up when tillering begins as recommended in the *Maryland Nutrient Management Manual* section I-B. In addition, a person may apply certain nutrients for greenhouse production and for other vegetable and small fruit crops listed in the *Maryland Nutrient Management Manual* Section I-B. The restriction on the application of chemical fertilizers during winter also does not apply to potash or liming materials.

3. Organic Fertilizer

a. A person may make a winter application of an organic nutrient source to cropland only if:
   (i) The operation has inadequate storage (*i.e.*, the storage capacity will be exceeded before the March 1 winter application restriction);
   (ii) The nutrient source is non-stackable; and
   (iii) There is no other reasonable option to manage it.

b. Any such application shall be made in accordance with Section I-B of the *Maryland Nutrient Management Manual*.

c. The prohibition against making a winter application of an organic source does not apply to:
   (i) The application of potash, liming materials, or manure deposited directly by livestock; or
   (ii) A person, following organic guidelines, applying an organic nutrient for greenhouse production and for certain vegetable crops, small fruit crops, small grain crops, and cool season grass sod production listed in the *Maryland Nutrient Management Manual* Section I-B.

d. Operators and generators of organic nutrient sources shall make plans for adequate storage t

0.o eliminate the need for a winter application before deadlines described in III. E.

e. The following restrictions apply to any such winter application:
   (i) Nutrient application is prohibited during the winter if the organic nutrient source is stackable (equal to or less than 60 percent moisture content, such as poultry litter) or adequate storage is available.
   (ii) Nutrient application is prohibited when the soil is saturated, when the ground is covered with snow, or when the ground is hard-frozen.
   (iii) Nutrient application is prohibited to land with a slope greater than 7 percent.
   (iv) Rates of application shall be minimized and available acreage used to the greatest extent practical. In no case shall the application rate per acre exceed the one-year phosphorus removal rate for the next harvested crop.
   (v) Winter applications shall be by injection only and made into existing vegetative cover,

small grain crops, or established hay fields and pastures. Injection into existing cover may be effected, for example, using vertical tillage equipment such as a Turbo-Till® or with a knifed injection system which minimizes soil disturbance and maximizes vegetative cover. Vegetative cover shall be maintained as such until March 1.

(vi) Applications required in emergency situations such as imminent overflow of a storage facility shall be managed in consultation with the Maryland Department of Agriculture. Operators in such situations shall contact the MDA regional nutrient management representative for guidance.

E. Prohibition against Winter Application

1. Except as provided in subsections III.E.2 and III.E.3, after July 1, 2016, a person may not make a winter application of a nutrient source to agricultural land.

2. a. The prohibition against making a winter application after July 1, 2016 does not apply to a nutrient source that originates from:

(i) A dairy or livestock operation with less than 50 animal units; or

(ii) A municipal wastewater treatment plan with a design flow capacity of less than 0.5 million gallons per day.

b. This exception to the general prohibition referenced in subsection III.E.1 expires after the winter application that ends on February 28, 2020.

3. The prohibition against making a winter application does not apply to potash, liming materials, or manure deposited directly by livestock. A person may make a winter application of certain nutrients for greenhouse production and for certain vegetable crops, small fruit crops, small grain crops, and cool season grass sod production listed in the *Maryland Nutrient Management Manual* Section I-B.

IV. TEMPORARY FIELD STOCKPILING (STAGING) FOR STACKABLE ORGANIC NUTRIENT SOURCES (equal to or less than 60% moisture content)

A. General Provisions

1. When other immediate use options and alternatives [illegible] orary field stockpiling (staging) of organic nutrient sou[illegible]d stockpiling (staging) provides greater environmen[illegible]nation of nutrients or applying nutrients [illegible]ptake.

2. To minimize the duratio[illegible]ors shall coordinate with integrators [illegible]s possible, thereby providing [illegible]rient needs.

3. Existing [illegible]g material in the field.

4. Any mate[illegible]kpile shall be land applied in the first spring season follo[illegible] stockpile.

B. The temporary field stockpiling (staging) shall be located:
   1. If a vegetated buffer is not in place, at least 100 feet from any surface water as defined in COMAR 15.20.08.03(B)(39) and any irrigation or treatment ditches; and if a vegetated buffer is in place, at least 35 feet from any such water;
   2. At least 100 feet from wells, springs, and wetlands; however, if the well is located down gradient from the temporary field stockpiling (staging) area, at least 300 feet from the well;
   3. At least 200 feet from any residence outside the operator's property;
   4. Outside flood prone areas and areas subject to ponding;
   5. If located on more than a 3 percent grade slope and no diversion installed, no farther than 150 feet from the top of the slope.

C. Poultry litter and other materials shall be stacked at least 6 feet high and peaked to prevent precipitation from soaking into the pile.

D. Materials shall be field stockpiled (staged) temporarily in a manner that prevents nutrient runoff.

E. Temporary field stockpiling (staging) locations for subsequent piles should stay at the same location, rather than be moved from place to place.

F. All nutrients shall be removed from the temporary field (staged) stockpile and the ground area thoroughly scraped or cleaned when the application of the nutrients takes place.

G. Temporary field stockpile (staged) areas shall be restored to its original condition and, if necessary, reseeded with grass or an agronomic crop to facilitate nutrient uptake.

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Land Management Administration • Solid Waste Program

Maryland Setback Standards and Approved Alternatives Consistent with CAFO/MAFO Requirements

Introduction:

The Maryland Department of the Environment (MDE) current Regulations Governing the Control of Water Pollution to address permit requirements for Concentrated Animal Feeding Operations (CAFOs) and Maryland Animal Feeding Operations (MAFO) include options for manure application setback standards in the Code of Maryland Regulations (COMAR) 26.08.03.09b(1). These setbacks for CAFOs are also included in 40 CFR Part 412.4(c)(5).

As written in Part IVB8 of the General Discharge (GD) Permit for Animal Feeding Operations (NPDES Permit No. MDG01, Maryland Permit No 09AF), the current "Protocols for the Land Application of Manure and Wastewater" include, for both CAFOs and MAFOs, the following setback provisions:

a. A **setback** of at least 100' from waters of the State, including field ditches, other conduits, intermittent streams, and drinking water wells, shall be maintained; or an **approved alternative** may be substituted for the 100' setback.
b. A setback of at least 100' from property lines shall be maintained, unless an approved alternative setback for property lines is established with the consent of the adjacent property owner.

I. Alternative Setback Option Applicable to Poultry MAFOs ONLY which is included in the GD Permit:

For slopes of 2% or less, a MAFO may satisfy the land application setback and buffer requirements of this permit by maintaining: 1) a vegetated filter strip at least 10 feet wide along field ditches and in the final 35 feet of the field ditches (applicable to ditch embankments and, to the maximum extent practicable, the channel) adjoining the receiving waters or the facility boundary, whichever occurs first, 2) a 35' vegetated filter strip or 3) a 50' setback from all other surface waters of the State.

II. Approved Alternative Setback Options to the Requirement in COMAR 26.08.03.09B(1)(a) for all CAFOs and MAFOs.

The following are the approved alternatives to the 100-foot setback, which have been established by MDE in consultation with the Maryland Department of Agriculture (MDA), Natural Resources Conservation Service (NRCS) and the University of Maryland Extension (UME).

Option 1: A 35-foot vegetative buffer strip established in accordance with the NRCS Practice Standards 390, 391, or 393, or systems as approved by MDE in coordination with the MDA, NRCS and UME which is included in the GD Permit.

The buffer strip shall consist of a permanent vegetative planting that is not part of a cropland or pasture rotation. The location, layout, and density of the buffer strip shall reflect the intended purpose of the practice, conditions of the site, and the objectives of the land user. Site preparation and planting to establish the buffer strip shall be done at a time and manner to insure survival and growth of the selected species. Select plant species that are native to Maryland, or are introduced and are non-invasive (i.e., not likely to spread beyond the planted area and displace native species). See Maryland NRCS 390, 391, and 393 Conservation Practice Standards for more details. Existing naturally vegetated areas may also qualify as buffers if they meet the criteria in the applicable standard.

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Note: **For any fields with slopes 8% or above, the NRCS approved soil loss prediction tool shall be used to determine risk. If significant risk (above tolerable soil loss) is determined, the appropriate Best Management Practices to reduce soil loss risk will be implemented according to NRCS standards.**

Option 2: 10-foot no nutrient application zone from Surface Waters Plus One of Three Land Treatment Practices

The producer (CAFO or MAFO) shall maintain a minimum 10-foot setback from surface waters on which no manure, chemical fertilizer or any other nutrient containing soil amendments are applied AND must implement at least ONE additional of the following Best Management Practices:

Option 2A: Winter crop establishment including small grains, brassicas, or other species in accordance with MDA Nutrient Management Plan (NMP) requirements with no nitrogen or phosphorus applications before March 1st.

Such crops shall be planted during the fall in the year manure application took place. The winter crop shall be applied to the entire field that received manure.

Option 2B: Subsurface injection or surface application of manure with incorporation within three days (72 hours) of manure or wastewater surface application.

If vertical tillage is used to minimally incorporate manure with surface residue, soil loss needs to be "T" or less as determined by RUSLE 2. Plug or spike aerators (such as Aerway®), seed bed conditioners and vertical till (such as Turbotill ™) may be used for incorporation.

Option 2C: Dry Manure Injection.

Injection of poultry litter and dry manure application (Subsurfer®).

Option 3: Other – Must be approved in writing by MDE in coordination with NRCS, UME and MDA. Applicant must demonstrate to the satisfaction of MDE and the other agencies that this option conserves and protects public health, natural resources, and the environment of the State, and controls water and land pollution to at least the same extent as would be obtained by compliance with the applicable requirements.

Policy for Part IV B(8b) of the GD Permit for Animal Feeding Operations

In accordance with 40 CFR Part 412.4(c)(5), and Part IV B(8b) of the GD Permit for Animal Feeding Operations, which states: "Protocols for the Land Application of Manure and Wastewater ... the following requirements for setbacks shall be maintained: ... b. A setback of at least 100' from property lines shall be maintained, unless an approved alternative setback for property lines is established with the consent of the adjacent property owner."

Policy: If the property line is coincident with a hydrologic conveyance to the waters of the State, then the setback requirements of Part IV B(8a) apply: A setback of at least 100' from waters of the State, including field ditches, other conduits, intermittent streams, and drinking water wells shall be maintained; or an approved alternative including options 1 through 5 may be substituted for the 100' setback."

RECORDKEEPING

APPLICATION VARIANCES

INSPECTION