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

AI Number: 16799 (combined w/ 130943 and 151587)

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

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 o Animal number, resulting in change of size category o CAFO to MAFO, MAFO to CAFO o No-Land to Land, Land to No-Land o 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:** 1437 Bridgeton Road
   City: Henderson **State:** MD **Zip Code:** 21640

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

7. **Email of Applicant:** [redacted]

Farm Information Site 1

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)*: _____

9. **Farm Address:** 110 Ferrell Farm Lane
   City: Henderson **County:** Queen Anne's **Zip Code:** 21640

10. **Watershed/Hydrologic Unit Code (HUC)** (12-digit): 021304050547

11. **Latitude/Longitude of Production Area** (Deg/Min/Sec): 39 - 05 - 17.7 / 75 - 51 - 00.0

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)*
Chickens - Roasters (dry manure)	82,500	Medium	House

**For poultry only (13-16):*

13. ***Number of poultry houses:** 3

14. ***Combined square footage of *all* poultry houses:** 80640 sqft

15. ***Date(s) poultry houses constructed:** 1991

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

Contact Information:
Phone No.: 302-934-3059
Address: 29292 John J Williams Hwy
Millsboro, DE 19966

Applicant (Owner/Operator Information)

5. **Mailing Address of Applicant:** 1437 Bridgeton Road
   City: Henderson **State:** MD **Zip Code:** 21640

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

7. **Email of Applicant:** [redacted]

Farm Information Site B

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)*: _____

9. **Farm Address:** 450 Ell Morris Road
   City: Henderson **County:** Queen Anne's **Zip Code:** 21640

10. **Watershed/Hydrologic Unit Code (HUC)** (12-digit): 021305050537

11. **Latitude/Longitude of Production Area** (Deg/Min/Sec): 39 - 04 - 58.11 75 - 51 - 15.6

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)*
Chickens (dry)	Roasters 180,000	Large	House
Swine	1200	Small	Barn

**For poultry only (13-16):*

13. ***Number of poultry houses:** 6

14. ***Combined square footage of *all* poultry houses:** 173952

15. ***Date(s) poultry houses constructed:** 1996 and 2018

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

   Contact Information:
   Phone No.: 302-934-3039
   Address: 29292 John J Williams Hwy
   Millsboro, DE 19966

Applicant (Owner/Operator Information)

5. **Mailing Address of Applicant:** 1437 Bridgeton Road
City: Henderson **State:** MD **Zip Code:** 21640

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

7. **Email of Applicant:** [redacted]

Farm Information

Site 3

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)*: _____

9. **Farm Address:** 3575 Goldsboro Road
City: Henderson **County:** Queen Anne's **Zip Code:** 21640

10. **Watershed/Hydrologic Unit Code (HUC)** (12-digit): 021304050537

11. **Latitude/Longitude of Production Area** (Deg/Min/Sec): 39-04-27.51 / 75-57-03.0

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)*
Chickens (dry manure)	Roasters 108,000	Medium	House

**For poultry only (13-16):*

13. ***Number of poultry houses:** 3

14. ***Combined square footage of *all* poultry houses:** 113,400

15. ***Date(s) poultry houses constructed:** 1996

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

Contact Information:
Phone No.: 302-934-3039
Address: 29292 John J. Williams Hwy
Millsboro, DE 19966

Manure/Mortality Management

17. Total Manure/Litter/Wastewater generated *annually*: 2069 + 2100 *circle one:* (tons / lbs / gallons)

18. Total Manure/Litter/Wastewater transported offsite *annually*: 234 *circle one:* (tons / lbs / gallons)

19. **Total number of acres controlled by applicant available for land application of manure/litter/process wastewater: *Owned:* 329 *Leased:* 296.5

***40 CFR Parts 122.23(b)(3) and 412.2(e) 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 *(ft^3, gal)*	C. Solid/Liquid
Manure Shed	18,400 cuft	Solid
Manure Shed	14,800 cuft	Solid
Manure Shed	20,600 cuft	Solid
Manure Shed	23,000 cuft	Solid

21. Mortality Management Method:

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

Environmental Justice (EJ) Score

The EJ Score is an overall evaluation of an area's environment and existing environmental justice indicators including pollution burden exposure, pollution burden environmental effects, sensitive populations, and socioeconomic factors. Provide the EJ Score resulting from the use of a Maryland EJ tool for the census tract where an applicant is seeking a permit. The EJ Score can be generated using MDE's EJ Screening Tool at: https://mdewin64.mde.state.md.us/EJ/.

22. EJ Score:	48.05

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 _____ **Date** _____

Printed Name of Applicant / duly authorized representative _____ **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

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

4/26/25
Date

Alan C. Eck
Printed Name of Applicant / duly authorized representative

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 ft²	37,500—124,999 animals *and* less than total house size of 100,000 ft²	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

Comprehensive Nutrient Management Plan

Alan Eck

1437 Bridgetown Road
Henderson, MD 21640

Farm Location:

110 Ferrell Farm Lane
Henderson, MD 21640

[redacted]

Plan developed by:
Name: David Kann
Address: PO Box 1011
East Berlin, PA 17316
Phone: 717-792-1274 or Cell: 717-309-6247
E-mail: agplanner@comcast.net

Queen Anne's
Soil Conservation District
211 E. Water Street
Centreville, Maryland 21617
410-758-1671 x3

Plan Written/Revised: 2/16/2025 [original(s) 1/2018]

Type of Plan: ☑ Land ☐ No-Land

**Concentrated Animal Feeding Operation (CAFO) or Maryland Animal Feeding Operation (MAFO) – provide the numbers below (if applicable)

AI Number: 66799 (Ferrell Farm Lane), 130943 (MAE-VUE), 151587 (Long Marsh)

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 CNMP plan revision will be needed when the number of animals deviates by 10% from the planned amount or when the operation changes from one type of livestock to another. Nutrient management plan revisions will be needed based on Maryland Department of Agriculture Nutrient Management regulations.

This CNMP was developed paying special attention to the USEPA's required nine minimum practices for water quality protection. This plan when implemented by the farmer 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, 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 implementation of this CNMP. It is my intention to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature:_____ Date:_____

Name *(print)*:_____

Certified Comprehensive Nutrient Management Plan (CNMP) Planner

As a Certified 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.

Signature _____ Date: 2/16/2025

Name: David D. Kann

Title: Engineering Technician / Environmental Planner
Company: Agronomics Plus

Planner Certification: PA-134 CCP: 259 and TSP-04-4509

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 CNMP plan revision will be needed when the number of animals deviates by 10% from the planned amount or when the operation changes from one type of livestock to another. Nutrient management plan revisions will be needed based on Maryland Department of Agriculture Nutrient Management regulations.

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Owner/Operator

As the owner/operator of this CNMP, I, as the decision maker, 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 implementation of this CNMP. It is my intention to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature: _____ Date: 4/26/25

Name *(print)*: Alan C Eck

Certified Comprehensive Nutrient Management Plan (CNMP) Planner

As a Certified 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.

Signature _____ Date: 2/16/2025

Name: David D. Kann

Title: Engineering Technician / Environmental Planner
Company: Agronomics Plus

Planner Certification: PA-134 CCP: 259 and TSP-04-4509

County Soil Conservation District ***(if applicable)***

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

Signature:_____ Date:_____

Name: _____

Plan Contents
CNMP Purpose and Special Conditions
General Operation Narrative and Introduction
Emergency Contact Phone Numbers for Persons/Agencies
Biosecurity
Chemical Handling
Animal Mortality Management
Biosecurity
Poultry Facility Operation & Management
Maps of the Agricultural Operation *Farmstead and Production Area Information* *Manure Generation Calcs* *Manure and Wastewater Handling and Storage* *Soil Descriptions and Soil Loss Calcs*
Implementation Schedule & Responsibility Guide
Nutrient Management Plan (NMP) *University of Maryland Crop Nutrient Recs based on Soil Fertility* *NMP Maps of the Farm Operation* *Summary of Nutrient Recommendations* *Manure/Litter Test Results*

Emergency Action Plans
Techniques in collecting a Manure Analysis & Application Equipment Calibration Procedures
Maryland Department of Agriculture Nutrient Management Requirements
Required Record Keeping (template forms)
Appendix: Additional Supporting Information • Resource Concerns Identification Worksheets

Purpose of the Comprehensive Nutrient Management Plan (CNMP)

A Comprehensive Nutrient Management Plan (CNMP) is a conservation system that is unique to your animal feeding operation (AFO). This plan is a grouping of conservation practices and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved for your operation. A CNMP incorporates practices to utilize animal manure and organic by-products as a beneficial resource. Your CNMP addresses natural resource concerns dealing with soil erosion, manure, and organic by-products and their potential impacts on water quality, which may derive from an AFO. A CNMP is developed to assist an AFO owner/operator in meeting all applicable local, tribal, State, and Federal water quality goals or regulations. For nutrient impaired stream segments or water bodies, additional management activities or conservation practices may be required to meet local, tribal, State, or Federal water quality goals or regulations.

The conservation practices and management activities planned and implemented as part of a CNMP must meet NRCS technical standards. For those elements included by an owner and/or operator in a CNMP for which NRCS currently does not maintain technical standards (i.e., feed management, vector control, air quality), producers should meet criteria established by Land Grant Universities, industry, or other technically qualified entities. Within each state, the NRCS State Conservationist has the authority to approve non-NRCS criteria established for use in the planning and implementation of CNMP elements.

Nutrient management and waste utilization manage the source, rate, form, timing, placement, and utilization of manure, rather than disposing of it as a waste residual. The goal is to effectively and efficiently use nutrient resources derived from animal waste to adequately supply soils and plants to produce food, forage, fiber, and cover while minimizing environmental impacts.

Minimum Standards of a CNMP

The Nine Minimum Standards to Protect Water Quality:

1. Ensure adequate storage capacity. Design, construct, operate, and maintain the production area and all animal waste storage structures to contain all animal waste, including any runoff or direct precipitation from a 25-year, 24-hour storm. Need to store dry manure in a way that prevents polluted runoff. Properly operate and maintain all storage facilities.

2. Ensure proper management of mortalities to prevent the discharge of pollutants into waters of the State. Do not dispose of mortalities in an animal waste or other storage or treatment system that is not specifically designed to treat animal mortalities without written permission from the Department, which may be granted if the Department determines catastrophic circumstances.

3. Divert clean water, as appropriate, from the production area to keep it separate from process wastewater. For CAFOs, conduct daily inspections of all outdoor water lines, and those located inside buildings with grated floors, on all days the CAFO is in operation. Correct any deficiencies found as a result of the inspections as soon as possible, and maintain a log of deficiencies found and corrected. The log must contain records of any deficiencies not corrected within 30 days and an explanation of the factors preventing immediate correction.

4. Prevent direct contact of confined animals with waters of the State.

5. Chemical Handling. Ensure that chemicals and other contaminants handled on-site are not disposed in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants. No pesticides, cleaning agents, or fuels shall be stored in any animal operation area, unless directly necessary for animal care and public health. These products shall not be allowed to enter waters of the State. The permittee shall notify the Department of any spills or other discharges as detailed under Part V.F. "Noncompliance Notification."

6. Conservation practices to control nutrient loss, including site-specific conservation practices.

a. An **AFO** shall maintain a setback of 100 feet or a 35 foot **vegetated filter strip** between stored **poultry litter** and **manure** and **waters of the State**, as well as field ditches. For existing permanent storage structures, an alternative to this requirement is provided in paragraph IV.A.1.b.6 of this permit.

b. For a poultry CAFO, permit condition IV.B.1. applies to the storage of poultry litter manure. In addition, poultry manure stored for more than 14 calendar days in the field, where manure may be applied as nutrients for crop growth under a nutrient management plan, shall be separated from ground water and storm water to prevent leaching or runoff of pollutants through the use of both a plastic liner and cover, at least 6 mils thick, or an equivalent method approved by the NRCS (if a standard is adopted by NRCS that meets federal requirements for CAFOs and is approved by the Department).

c. For a poultry MAFO, MDA and NRCS requirements apply to the field storage of poultry litter manure. The following additional requirements for poultry litter manure field storage areas do not include authorization to discharge pollutants to surface waters of the State:

i) **MAFO** poultry litter manure stored for more than 30 calendar days in the field shall be separated from ground water and storm water to prevent leaching or runoff of pollutants
through the use of both a plastic liner and cover, at least 6 mils thick, or an equivalent method approved by the NRCS.

ii) If reputable research is performed, based on a plan approved by the Department and MDA, resulting in data that indicates that 30 calendar days is more restrictive than necessary to protect water quality, and/or other more effective approaches to controlling discharges from poultry manure stockpiles are recommended and available as a result of the study, the 30 calendar day requirement shall be automatically stayed and the permit reopened to implement appropriate permit revisions through a public process.

7. Protocols for manure and soil testing. Identify specific animal waste sample collection and analysis protocols to include at least annual analysis for phosphorus and nitrogen content. Include analysis of soil samples for pH and phosphorus content at least once every three years for all fields where animal waste may be applied. Protocols shall be consistent with Maryland's technical standards at COMAR 15.20.07 and 15.20.08.

8. Protocols for the Land Application of Manure and Wastewater. Follow protocols for development of a nutrient management plan and for the land application of animal waste in COMAR 15.20.07 and 15.20.08, which specify who is eligible to develop a NMP, determination of limiting nutrient, nutrient recommendations, acreage, and expected yield for each field. Animal waste shall not be applied at a rate higher than agronomic requirements in accordance with the Maryland Nutrient Management Manual. Animal waste shall be prevented from entering field ditches, adjacent properties, and other waters of the State, or conduits to waters of the State, except floodplains. In addition, the following requirements for setbacks shall be maintained:

a. A **setback** of at least 100 feet from waters of the State, as well as field ditches, other conduits, intermittent streams, and drinking water wells, shall be maintained; or an **approved alternative** may be substituted for the 100 foot setback.
b. A setback of at least 100 feet from property lines shall be maintained, unless an approved alternative setback for property lines is established with the consent of the adjacent property owner.
c. Alternative Setback Requirements Applicable to Poultry MAFOs. 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 ten 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 operation boundary, whichever occurs first, and 2) a 35 foot vegetated filter strip or a 50 foot setback from all other surface waters of the State, as defined in Part II.JJ.1. In Critical Areas, other alternative setbacks may be required by the Department.

9. Record Keeping. Maintain all records necessary to document the development and implementation of the NMP and Conservation Plan and all other requirements of Parts IV and V of this permit. These records shall be maintained for five years.

The nutrient management plan, contained in this CNMP, will be updated before the expiration date.
The NM plan will need revised on or before the expiration date. Any substantial changes, before this expiration date will need to be documented and revisions made by a certified consultant. A copy of this revision must be kept with your nutrient management records.

A Nutrient Management Annual Implementation Report must be submitted, each year, to the Maryland Department of Agriculture on or before March 1st.

Operator information:
Alan Eck
1437 Bridgetown Road
Henderson, MD 21640
[redacted]

Production Area 1: 39°05'17.4"N 75°51'04.6"W
Production Area 2: 39°05'01.5"N 75°51'11.8"W
Production Area 3: 39°04'27.7"N 75°51'02.3"W

CNMP - Consultant information:
David D. Kann
PO Box 1011
East Berlin, PA 17316
(717) 792-1274
CCP #: 259
License Number: 2399

NMP – Consultant information:
David Kann
PO Box 1011
East Berlin, PA 17316
717-792-1274
Cert.#: PA-134

Date Nutrient Management Plan Developed:

February 14, 2025

Nutrient Management Plan Narrative:
This operation is a poultry and swine operation. Recently, Alan purchased two other poultry sites/operations. The three individual CAFO sites are contiguous. The MDE CAFO Animal Information reference numbers will be combined to form one AI number. Site 1, consists of 3 poultry houses. Site 2 (MAE-VUE) consists of two structures for 1200 swine and 6 poultry houses. Site 3 (Long Marsh) has 3 poultry houses.

There are typically two groups of hogs that are grown per year (1200 each). The crop rotation is corn, soybean and hay. Manure in conjunction with commercial fertilizer is used to meet the nutrient needs of the crops.

County Location: Queen Anne's
CODE: 0047 WS CODE: 02-13-04-05 (Tuckahoe)

Property ID	Acct ID Acres	Farm Name	Acres	County	Watershed
[redacted]	160 30.43	Alan Eck Farm (Farrel)	139.6	Queen Anne's	0047
[redacted]	216.55 67.38	MAE-VUE	179.3	Queen Anne's/ Caroline	0047
[redacted]	26.41	Long Marsh	12.5 ac *(HQ only)*	Queen Anne's	0047
[redacted]	216.55 67.38	T 6188	44.0	Queen Anne's	0047

[redacted]	195.92	Skinner	15.5	Queen Anne's	0047

TOTAL ACRES UNDER PLAN **378.4**

Farm Name	Alan C. Eck Farm
Mailing Address	1437 Bridgetown Road, Henderson, MD 21640
Farm Address	110 Ferrell Farm Lane, Henderson, MD 21640
Farm Phone	
Directions to Farm	EAST ON RT 19, TURN SOUTH ONTO GOLSBORO ROAD (RT 313). TRAVEL 1/8TH OF A MILE AND TURN LEFT ONTO ELL MORIS ROAD. CONTINUE A HALF MILE ON ELL MORRIS ROAD, FARMS ON BOTH SIDES OF THE ROAD.

Farm Contacts

	Name	Daytime Phone	Farm Phone	email
Farm Owner	Alan Eck	[redacted]	[redacted]	
Farm Operator	Alan Eck	[redacted]		
Fire or Ambulance	**911**	**911**	**911**	**911**

Agency Contacts

Contact Agency	Person / Office	Day Phone	Emergency Number
Health Department	**County Office**	**410-758-0720**	
	County Office	**410-537-3000**	
Before you DIG, call Maryland's Miss Utility		**1-800-441-8355**	
Maryland Department of the Environment	**Office:** **MDE** Animal Feeding Operation Division **1800 Washington Blvd.** **Suite 605** **Baltimore, MD 21230**	**410-537-3000**	**1-800-633-6101**

USDA Veterinary Services State Veterinarian	**Dr. Jennifer Trout**	**1-866-536-7593 410-841-5810**	**410-841-5971 after hours**
Sheriff's Office	**Sheriff Gary Hofmann**	**410-758-0770**	
NRCS	**County Office**	**410-758-1671**	
U of MD Extension	**County Office**	**410-758-0166**	
MDA Nutrient Management	**Headquarters**	**410-841-5959**	**1-800-492-5590**
MDA Nutrient Management	**Regional office 28577 Marys Court, Ste 4 Easton, MD 21601** **Mailing address: PO Box 549 Cordova, MD 21625**	**410-279-4003**	
Agronomics Plus (plan writer)	**David Kann**	**717-792-1274**	

Operation and Maintenance Requirements for BMPs (present)
Access Road - 560 ~ The road should be graded-out and low areas and/or potholes removed. Realignment and resurfacing may be necessary to avoid standing water or open water areas. Fill in these low areas with gravel and re-grade, as needed, to maintain road cross-section. ~ Provide culverts, fords, or grade dips for the proper management of stormwater. ~ Access roads shall be given a wearing course or surface treatment if required by traffic demands, erosion control, or dust control. ~ Inspect culverts, roadside ditches, water bars, and outlets after each major runoff event and restore flow capacity as needed. ~ Maintain companion conservation practices, such as grass filter areas, in adequate vegetation.
Critical Area Planting (CAP) and Filter Strips - 342 ~ Vegetation must be maintained in vigorous condition. ~ In order to keep the optimum sediment retention and other water quality benefits, mow 3-4 times annually to a height 3 to 5 inches. ~ Control undesirable plants by pulling, mowing, or spraying with selective herbicide. Control noxious weeds as required by state law. ~ Maintain sheet flow entering the filter strip. Repair all rills and small channels within this vegetative area. ~ Sediment that accumulates along the upper part and within the filter strip area shall be removed before it accumulates to a height that diverts runoff water away from the vegetative filter area. The area disturbed by this removal shall be re-graded and reseeded.
Diversion – 362 ~ An operation and maintenance plan shall be prepared for use by the client. The plan shall include specific instructions for maintaining diversion capacity, storage, ridge height, and outlets. The minimum requirements to be addressed in the operation and maintenance plan are: Provide periodic inspections, especially immediately following significant storms. Promptly repair or replace damaged components of the diversion as necessary. Maintain diversion capacity, ridge height, and outlet elevations especially if high sediment yielding areas are in the drainage area above the diversion. Establish necessary clean-out requirements. Each inlet for underground outlets must be kept clean and sediment

Grass Waterway – 412

A maintenance program shall be established to maintain waterway capacity, vegetative cover, and outlet stability. Vegetation damaged by machinery, herbicides, or erosion must be repaired promptly.

1. Inspect for damage at least once a year and after each major storm. Fill in and seed any bare or washed areas following original
1. seeding specifications;
2. If waterways are not fertilized at the same time that the surrounding cropland is fertilized, a maintenance application should be made. Apply one-half the amount of fertilizer used during vegetation establishment as needed to maintain a vigorous sod;
3. Minimize damage to vegetation by excluding livestock or by only allowing controlled grazing;
4. Remove sediment deposits to maintain capacity of grassed waterway;
5. Mow or control graze vegetation periodically to encourage dense vigorous growth and to maintain capacity.
6. Control noxious weeds as required state law;
7. Do not use as a field road. Avoid crossing with heavy equipment when wet;
8. Avoid turnrows or plowing parallel to waterway to prevent flow from entering channel;
9. Avoid spraying waterway with herbicides during crop applications and herbicide runoff into the waterway.

To enhance wildlife values, avoid mowing the diversion during the peak nesting season (April 15 to August 15).

Heavy Use Area (HUA) - 561

- Maintain a stable, non-eroding surface for areas frequently used by vehicles or animals.
- Maintain and repair adjacent companion conservation practices that handle sediment, nutrients, particulate matter, and organic matter.
- After each and every manure handling event that leaves behind, manure, litter, and or debris on the HUA surface; it must be cleaned-up. In all cases, material left behind on the HUA must be swept-up or vacuumed.
- Repair any deteriorating areas.
- Maintain flow into filter areas by removing accumulated solids, reconstructing waterbars, etc.

Underground Outlet - 620

- Inspect collection and storage devices, valves, outlets and pipelines at least twice per year. Make repairs as needed;
- Check for debris, algae, sludge or other materials in the system, which may restrict the inflow or outflow system, and remove;
- Protect from damage due to livestock and farm equipment. Maintain fences and other devices used for this purpose;
- Check for leaks and repair immediately.

Pond - 378

- An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

Waste Storage Facility - 313

- ~ Check walls and floors often - minimum of 2 times a year when facility is empty - for cracks and/or separations. Where concrete is used make inspections and repair as needed.
- ~ All building materials shall be kept in good working condition free from defect.
- ~ Check backfill areas around structure (concrete, steel, timber, etc) often 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.
- ~ 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.
- ~ Trusses/roof supports shall be examined during snowfall events.
- ~ Roof materials shall be replaced as wear/leakage occurs. Metal roofing may require periodic painting.

Water and Sediment Control Basin - 638

~ Provide a written operation and maintenance plan for each planned practice in a conservation system. Include in the plan for the water and sediment control basins, the embankment, design capacity, vegetative cover, and the outlet. Maintenance should include provisions for inspection of outlets, and embankments after each storm event. Any damage to the basin should be corrected as soon as possible to prevent major damages.

~ In the O&M plan, specify the maintenance interval necessary to maintain the sediment design capacity by cleaning the basin or, where practical, by raising the embankment height. Place excavated sediment on cropland or the embankment to enhance topography and maintain fertility. Maintain the vegetation on the embankment to prevent sheet and rill erosion or gullying. Trees, woody cover, and borrowing animals generally create problems on embankments and should be controlled.

Schedule of Implementation Agreement

This Schedule of BMP Practices presented here has been reviewed by the person responsible for compliance with the requirements of the Agricultural farm operation.
As the owner/operator, I 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 in 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 NRCS or my Technical Service Provider and have this schedule revised.

_____ _____

Farm Owner/Operator **Date**

Implementation Schedule for the Farm Operation

Schedule of Operations

This section describes the practice or action necessary for implementing this comprehensive plan. This element addresses the components and activities associated with the livestock production facility.

IMPORTANT!

All practices have been installed and are being managed appropriately.

Practice and Facility Implementation Schedule

N/A

☑ **All resource concerns have been addressed. ALL BMPs associated with the production area and associated facilities, to address these concerns, have been completed and no additional best management practices are recommended or required at this time.** ***(this item will be checked only after the entire Schedule of Implementation has been implemented and no other resource concerns have been identified)***

Schedule of Implementation Agreement

The schedule of conservation practices presented here has been reviewed by the person responsible for compliance with the requirements of the agricultural farm operation.

As the owner/operator, I 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 schedule above. Should I not be able to implement any of the above items according to the schedule, I will contact NRCS or my Technical Service Provider and have the schedule revised.

Signature: _____ Date: 4/26/25

Name (*print*): Alan C. Eck

In Case of an Emergency Storage Facility Spill, Leak, or Failure:

Implement the following first containment steps and where containment material is located:

This plan will be implemented in the event that animal by-products from your operation are leaking, overflowing, running off site or there is imminent danger that such may occur from damage or failure of the system or a threatening natural occurrence, such as a hurricane. You should not wait until manure reaches surface waters or leaves your property to consider that you have a problem. You should make every effort to ensure that this does not happen. This plan should be posted in an accessible location for all employees at the facility. The following are some action items you should take in the event of an emergency:

Action Plan

In case of an emergency; including a spill, leak, or failure:

Spills from containment areas or structure failures:

1. Stop all other activities to address the problem;
2. Call for assistance, if needed;
3. Construct sand bag or earthen dike to contain or divert spills away from surface inlets, roadways, and surface water features. Add absorbent material such as pads, sawdust, straw or dry soil as needed for containment.
4. Remove spill from diked area with appropriate equipment such as: vacuum tank, front-end loader and spreader, or other method as directed by local or state authorities.
5. Complete the clean-up and repair the necessary components.
6. Initiate additional containment measures, corrective measures, or property restoration measures as directed by emergency agency officials.

Spills during pumping operations:

1. Shut off all pumping equipment.
2. Build a sand bag or earthen dike.
3. Remove spill from diked area with appropriate equipment such as: vacuum tank, front-end loader and spreader, or other method as directed by local or state authorities.
4. If the spill was due to a structural failure, contact the local NRCS office immediately for repair recommendations.

Spills during transportation on public roadways:

1. Coordinate efforts with local law enforcement and emergency personnel.
2. Contain spill and divert waste away from watercourses;
3. Call for additional assistance, equipment, and supplies, as appropriate;
4. Remove spill with appropriate equipment such as: vacuum tank, front-end loader and spreader, or other method as directed by local or state authorities.

Spill area clean up:

1. Break down dike.
2. Dry out sand bags.
3. Properly discard any absorbent pads used.
4. Level any soil disturbance and incorporate residue.
5. Re-vegetate disturbed area.

In Case of an Emergency Land Application Manure/Waste Discharge

CNMP EMERGENCY RESPONSE (CONT.)

If manure is spilled directly into waters of the state, it can create an environmental or public health hazard. Contact MDE as soon as possible within 24 hours after a spill.

Provide the following information:

1. Name and identification of the farm;
2. A description of the discharge and cause, including a description of the flow path to the receiving waters, and an estimate of the volume discharged;
3. Any obvious damage, such as a fish kill or property damage;
4. The period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue;
5. Describe the steps being taken to reduce, eliminate, and prevent recurrence of the discharge.

Threatening Natural Occurrences

Prevent or minimize damage caused by threatening natural occurrences, such as hurricanes or strong storms associated with approaching fronts - actions include:

1. Do not spread manure on fields just prior to an approaching storm.
2. Do not spread manure on fields that flood during high rainfall events.
3. Notify State Veterinary Office - Animal Emergency Response Coordinator (See Table below) or Local Animal Emergency Response Coordinator for relocation of animals if needed.

Personal injury

1. Stop all other activities to deal with the emergency.
2. Call for help (See Emergency Contact Information).

Catastrophic deaths – Disease Related

1. Notify State Veterinary Office.
2. Limit exposure to other animals.
3. Prevent visitation by unnecessary people.
4. Dead animals should be moved into a DHEC approved transport vehicle or a DHEC approved storage area or bin.
5. Record date of catastrophic deaths, number of deaths, method and location of disposal.

Catastrophic deaths – Disaster Related

1. Notify State Veterinary Office - Animal Emergency Response Coordinator immediately. (See Emergency Contact Information)
2. Remove mortality from the barns/houses.
3. Dispose of mortality in the manner given in this CNMP for emergency dead animal disposal.
4. Record date of catastrophic deaths, number of deaths, method and location of disposal.

Manure Removal

1. Place manure in stacking structure if available. Do not stack old manure next to new or wet manure next to dry.
2. Records should be kept for any manure which is transported off the farm site.

Fire

1. Stop all other activities to deal with the emergency.
2. Try to extinguish the fire with the appropriate rated fire extinguishers.
3. If fire cannot be contained, call for help (See Emergency Contact Information)

In Case of an Emergency Land Application Manure/Waste Discharge

Assess the extent of the spill and note any obvious damages

1. Did the by-product reach any surface waters?
2. Approximately how much was released and for what duration?
3. Any damage noted, such as employee injury, fish kills, or property damage?
4. Did the spill leave the property?
5. Did the spill have the potential to reach surface waters?
6. Could a future rain event cause the spill to reach surface waters?
7. Are potable water wells in danger (either on or off of the property)?
8. How much reached surface waters?

Provide the following information when reporting an emergency

1. Your name and phone number.
2. Directions to the farm.
3. Description of emergency.
4. Estimate of the amounts, area covered, and distance traveled.
5. Has manure reached surface waters or major field drains?
6. Is there any obvious damage: employee injury, fish kill, or property damage?
7. What activities are currently in progress to contain situation?

Implement procedures as advised by MD NRCS and technical assistance agencies to rectify the damage, repair the system, and reassess the manure management plan to keep problems with release of manure from happening again.

Documentation

The following items shall be documented in writing and filed with your farm operation records for future reference and emergency response training:

1. Date and time, location of spill, affected landowners.
2. Affect of manure spill on any surface water body or potable water well.
3. Approximately how much manure was released and for what duration.
4. Amount of manure, if any, which left the farm property.
5. Any damage, such as personal injury, fish kill, property damage.
6. Cause of the spill.
7. Procedure to handle the emergency.
8. Clean up efforts.
9. List of authorities called, those that responded, and the time it took for them to respond.
10. Recommendations to prevent a reoccurrence.

In Case of an Emergency Land Application Manure/Waste Discharge

Implement the following first containment steps and where containment material is located:

1. Stop all other activities to deal with the emergency.
2. Stop manure pumps and irrigation equipment. Close valves. Separate pipes to create air gap if necessary to stop manure flow.
3. Assess the extent of the emergency and determine how much help is needed.
4. Call for help if needed.
5. If spilled on the road, call the sheriff's office for traffic control and clean the spill immediately from the road and roadside if needed.
6. Contain the spill or runoff from entering the stream or waterway using straw bales, saw dust, or soil material.
7. Prevent further runoff by incorporating the waste.
8. Initiate additional containment measures, corrective measures, or property restoration measures as directed by emergency agency officials.

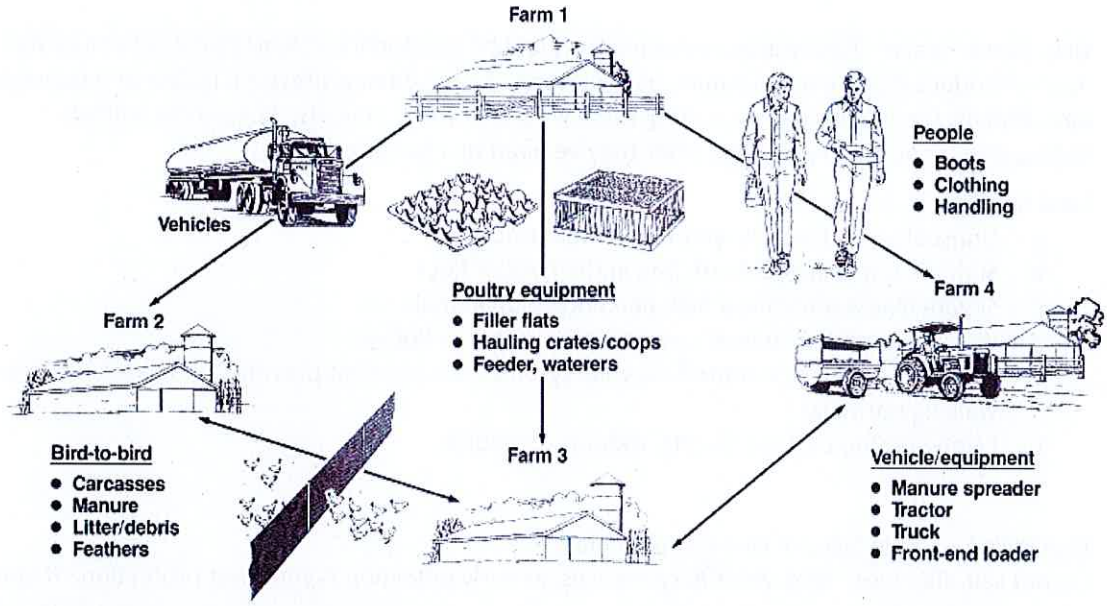
Follow the above guidelines for:

- **Assessing the extent of the spill and noting obvious damages**
- **Provide information when reporting the emergency**
- **Documentation of your farm operation records**

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 effect 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.

5. 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.
6. 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

7. 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, 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.

In Case of a Chemical Handling Emergency

Chemical Handling

This section contains information on using pesticides safely, emergency contact information, spill information and the proper disposal of pesticide containers. For further information, please contact the Maryland Department of Agriculture Pesticide Regulation Program.

USE PESTICIDES SAFELY

1. Check the label - Be sure the pest you need to control is listed on the label.
2. Buy only enough pesticide for one or, at most, two years. Pesticides stored longer may degrade and become less active.
3. Always wear long trousers, a long-sleeved shirt, socks, and shoes when applying any pesticide. Other protective equipment, such as a respirator, goggles, impermeable gloves and boots maybe necessary or desirable for extra protection.
4. Do not wear leather shoes, boots, or gloves while handling pesticides. Leather absorbs pesticides and cannot be decontaminated easily.
5. Take care to avoid pesticides coming into contact with your eyes, mouth, or skin.
6. Wash your hands with soap and water immediately after applying a pesticide. Shower as soon as possible.
7. Stand upwind while mixing and applying pesticides.
8. Unless the label specifically allows such use, never apply a pesticide where it could contact water sources, and avoid applying to bare ground.
9. Never apply a pesticide at a higher rate than the label directs.
10. Wash all clothing worn during mixing and application separately from household laundry. Use a heavy duty detergent and hot water. Dry the clothes in a hot dryer or outside in the sun.
11. Store pesticides only in their original containers. Keep them away from food, feed, seed, and fertilizers in a locked building or cabinet.
12. Dispose of empty pesticide containers in accordance with label directions and state and local requirements. See Disposal of Pesticide Containers

DISPOSAL OF PESTICIDE CONTAINERS

Pesticides (herbicides, insecticides, fungicides, etc.) are designed to be toxic. Improper disposal of pesticides or their containers can lead to environmental contamination and may incur both civil and criminal penalties. There is usually no safe and legal way to dispose of leftover pesticide; all of the chemical must be used up on registered sites or crops according to directions on the label. The Environmental Protection Agency (EPA) has accepted certain procedures, outlined below, which are designed to remove as much residue from the container as possible. Only after following these procedures may pesticide containers be deposited in a licensed sanitary landfill.

Containers of Liquid Formulations

1. Triple rinse the container immediately after emptying it into the spray tank:
   Fill the container 1/4 full with the proper diluent (usually water or oil). Replace the closure or plug the opening. Rotate the container. Add rinsate to the spray tank. Repeat this procedure 2 more times
2. Puncture the top and bottom of the container to prevent its reuse.
3. Deposit the empty container in a licensed sanitary landfill.

Containers of Dry Formulations

1. Empty the contents into the tank, shaking the container to remove as much residue as possible. Take care not to inhale any dust.
2. Open both ends of the container to help remove residue and to prevent reuse.
3. Deposit the empty container in a licensed sanitary landfill.

If checked, the indicated measures will be taken to prevent chemicals and other contaminants from contaminating process waste water or storm water storage and treatment systems.

√	*Measure*
√	***All chemicals are stored in proper containers. Expired chemicals and empty containers are properly disposed of in accordance with state and federal regulations. Pesticides and associated refuse are disposed of in accordance with the FIFRA label.***
	Chemical storage areas are self-contained with no drains or other pathways that will allow spilled chemicals to exit the storage area.
√	***Chemical storage areas are covered to prevent chemical contact with rain or snow.***
	Emergency procedures and equipment are in place to contain and clean up chemical spills.
√	***Chemical handling and equipment wash areas are designed and constructed to prevent contamination of surface waters and waste water and storm water storage and treatment systems.***
	All chemicals are custom applied and no chemicals are stored at the operation. Equipment wash areas are designed and constructed to prevent contamination of surface waters and waste water and storm water storage and treatment systems.

EMERGENCY CONTACTS:

For individuals exposed to chemicals the following are the telephone numbers for emergency treatment centers and the telephone number for the nearest poison control center.

1. Maryland Poison Control Center 1-800-222-1222
2. Maryland Department of Agriculture (Pesticide Section), 410-841-2721
3. Delaware Department of Agriculture (Pesticide Section), 302-698-4570
4. CHEMTREC Emergency Hotline, 1-800-424-9300
5. Local Police/Fire 911
6. National Pesticide Information Center (NPIC), 1-800-858-7387, Monday - Friday, 6:30 a.m. to 4:30 p.m. Pacific Time

EMERGENCY SPILLS:

1. Fires, spills or other incidents of pesticide release to the environment must be reported immediately to the Maryland Department of the Environment (MDE), Emergency Response at: 1-866-633-4686 or 1-866 MDE-GOTO (24 hours a day, 7 days a week)

2. Fires, spills or other incidents of pesticide release to the environment can also be reported immediately to the State of Maryland Department of Agriculture: 1-410-841-5710 or 1-800-492-5590 (8:00 AM to 4:30 PM - Monday through Friday)

3. The 24-hour CHEMTRAC telephone number for emergency assistance is: 1-800-424-9300

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.

The purpose of this CNMP is to present options to manage normal, day-to-day mortalities and even catastrophic mortalities should this occur. Planning for a catastrophic mortality event should include the study of appropriate regulations, locating a site for disposal, and having insurance to cover the cost involved.

Mortality Management Methods

Mortality must be managed for at least three reasons:

1. Hygiene
2. Environmental protection
3. Aesthetics

Acceptable ways for managing mortality include:

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

Of these methods, only the rendering and composting methods recycle the nutrients. The other methods, in essence, waste the nutrients.

This farm operation will use composting for normal mortality and composting for catastrophic mortality. See below:

Composting – Poultry

Composting is the controlled aerobic biological decomposition of organic matter into a stable, humus-like product, called compost. Decomposition is enhanced and accelerated by mixing organic waste with other ingredients in a manner that optimizes microbial growth. Composting mortality can be likened to aboveground burial in a biomass filter where most of the pathogens are killed by high temperatures.

As the microbial population consumes the most readily degradable material and grows in numbers, the temperature of the compost pile begins to rise. Efficient composting requires that the initial compost mix have:

A balance source of energy (carbon) and nutrients (primarily nitrogen), typically with a carbon-to-nitrogen (C:N) ratio of 15:1 to 35:1.
Sufficient moisture, typically 40% to 60%.

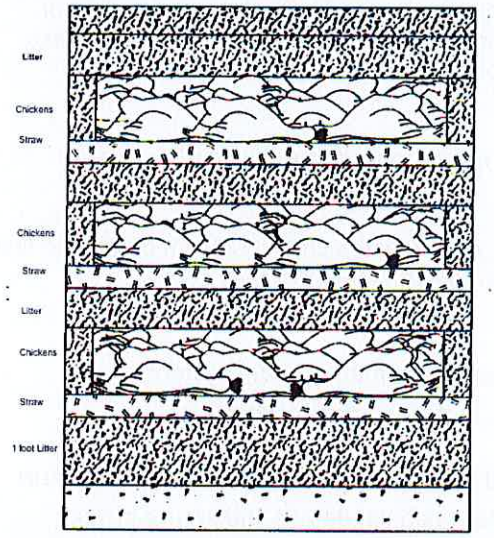
Sufficient oxygen for an aerobic environment.
A pH in the range of 6 to 8.

For proper composting, correct proportions of carbon, nitrogen, moisture, and oxygen need to be present in the mix. Common carbon sources are sawdust or wheat straw. It is desirable because of its bulking ability, which allows entry of oxygen. Other carbon sources that could be used are peanut hulls, cottonseed hulls, sawdust, leaves, etc. If lab testing of the litter or experience indicates that the carbon/nitrogen ratio is adequate (20 - 35:1 ratio), then litter alone should be sufficient for composting mortality as long as desirable bulking ability is achieved and moisture is properly managed. Moisture management is critical and must be maintained between 40 and 55 percent (40% -does not leave your hand moist when squeezed, 55% - if more than two drops drip from your hand the material is too moist).

Recipe for composting broiler mortality

INGREDIENT	VOLUME	WEIGHTS
Straw	1.0	0.10
Carcasses	1.0	1.0
Litter	1.5	1.2
Water	0.5	0.75

Compost process
The first layer is one foot of litter.
A 4-6 inch layer of carbon amendment (sawdust is preferred) is added according to the recipe
A layer of carcasses is added. Carcasses shall be laid side-by-side and shall not be stacked on top of one another. Carcasses placed directly on dirt or concrete floors, or against bin walls will not compost properly.
Water is added (uniform spray).
Carcasses are covered with a 6-inch layer of litter.
Next layer of carcasses begun with carbon amendment and above steps repeated.
When composter is full, cap the 6-inch layer with four additional inches.



Maintain the moisture content at 40 to 55 percent during the composting process (40% - does not leave your hand moist when squeezed, 55% will allow about one drop of water to be released when squeezed, > 55% - if more than two drops drip from your hand the material is too moist, therefore add sawdust or dry carbon source).

Temperature is the primary indicator to determine if the composting process is working properly. A minimum temperature of 130° F shall be reached during the composting process. A temperature of 140° F is optimum; however, temperatures may range up to 160° F. If the minimum temperature is not reached, the resulting compost shall be incorporated immediately after land application or recomposted by turning and adding moisture as needed. Compost managed at the required temperatures will favor destruction of any pathogens and weed seeds.

Good carcass compost should heat up to the 140° range within a few days. Failure of the compost material to heat up properly normally results from two causes. First, the nitrogen source is inadequate (example wet or leached litter). A pound of commercial fertilizer spread over a carcass layer will usually solve this problem. Secondly, the compost fails when too much water has been added and the compost pile becomes anaerobic. An anaerobic compost bin is characterized by temperatures less than 120°, offensive odors, and black oozing compound flowing from the bottom of the compost bin. In this case a drier bulking / carbon amendment should be added to dry the mix. Then, the material should be remixed and composted.

It is possible, though unlikely, for the temperature to rise above the normal range and create conditions suitable for spontaneous combustion. If temperature rises above 170° F, the material should be removed from the bin and cooled, spread on the ground to a depth not to exceed six inches in an area away from buildings. Water should be added only if flames occur. If temperature falls significantly during the composting period and odors develop, or if material does not reach operating temperature, investigate piles for moisture content, porosity, and thoroughness of mixing.

After this first stage process, the material should be turned into a second bin and allowed to go through a second heat process. For larger birds, especially turkeys, a third turning may be necessary for complete degradation of the birds. Typically, the process can be considered "done" within 21-28 days from the time the compost is filled for broilers. For turkeys, the process usually requires about 60 days. After the heat process, curing period of one to three months is usually required before the material is stable. Compost may be land applied after the secondary or tertiary composting. If any animal parts are still in the mix, the material must be incorporated. If immediate application is not possible the material should be stored using the same requirements as that of stored litter in the Stacking Shed O&M statement.

Inspect compost structure at least twice annually when the structure is empty. Replace any broken or badly worn parts or hardware. Patch concrete floors and curbs as necessary to assure water tightness. Examine roof structures for structural integrity and leaks. Inspections shall be documented on the attached worksheet.

The primary and secondary composters and the litter storage area should be protected from outside sources of water such as rain or surface runoff.

In order to assure desired operation of the composting facility, daily records should be kept during the first several compost batches. This can be helpful in identifying certain problems that may occur.

Operation and Maintenance

This section addresses the operation and maintenance of the manure management system, conservation practices, soil testing, manure/compost testing, and equipment calibration.

Operation and maintenance of structural, non-structural, and land treatment measures requires 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. Listed below is the operation and maintenance for the structural, non-structural, and land treatment measures for your farm system.

Item Specific Operation and Maintenance

Any specific items will be addressed in the Waste Management and O&M Plan for the Waste Storage Facility.

Vector Control and Abatement

Management and sanitation are the real keys to preventing or eliminating any vectors' problems. If these weaknesses are not addressed, the problems will recur. Pesticides are the final tools in controlling the problem.

Most problems with insects (such as flies), rodents (such as rats and mice) and scavenging animals, (such as dogs, cats, foxes, possums, raccoons, etc.) can be minimized by keeping the facility and surroundings clean and properly maintained. This includes:

- Removing all excess building materials.
- Removal of any excess feed from the houses or around bins.
- Keeping grass and weeds mowed
- Keeping all buildings free of trash and debris.
- The proper use and servicing of bait stations.
- Proper and timely disposal of dead animals.
- Keeping all manure cleaned up caused by spillage from around the houses. Keep all temporary stored manure covered and dry.
- Any spillage of feed should be cleaned as soon as possible and all feed will be kept dry. Covers on feed storage bins should be used. Drainage away from all feed storage containers should be provided to reduce moisture accumulation.

Actions to be taken for the abatement of an insect problem:

- Mow vegetation around facility.
- Clean up any spilled feed.
- Repair or replace equipment that is spilling feed.
- Use covers to prevent feed from getting wet.
- Dispose of any wet or contaminated feed.
- Check for leaks from waterers, etc. and repair as needed.
- Remove any garbage or trash from the facility.
- Remove and dispose of all dead animals immediately and appropriately.
- Use approved baits, poisons, etc. as appropriate.

Actions to be taken for the abatement of a rodent problem:

- Mow vegetation around facility.
- Clean up any spilled feed.
- Repair or replace equipment that is spilling feed.
- Use covers to prevent feed from getting wet.
- Dispose of any wet or contaminated feed.
- Remove all excess building materials.

- Remove any garbage or trash from the facility.
- Check for damage or leaks from waterers, etc. and repair as needed.
- Remove and dispose of all dead animals immediately and appropriately.
- Use approved baits, poisons, etc. as appropriate.

Actions to be taken for the abatement of scavenging animal problems:

- Remove and dispose of all dead animals immediately and appropriately.
- Mow vegetation around facility
- Clean up any spilled feed.
- Repair or replace equipment that is spilling feed.
- Use covers to prevent feed from getting wet.
- Dispose of any wet or contaminated feed.
- Remove all excess building materials.
- Remove any garbage or trash from the facility.
- Check for digging activities that could damage or weaken buildings and repair as needed.
- Contact the proper officials for additional control measures.

For more details on specifics (rats, filth flies, etc.) information may be obtained from the Maryland Agricultural Extension Offices or the NRCS office.

Air Quality

NRCS does not have specific technical criteria for these considerations that are required for CNMPs. However, the following items may be considered when addressing Air Quality, most Air Quality issues are associated with odor.

Air quality in and around structures, waste storage areas, and treatment sites may be impaired by excessive dust, gaseous emissions such as ammonia, and odors. Poor air quality may impact the health of workers, animals, and persons living in the surrounding areas. Ammonia emissions from animal operations may be deposited to surface waters, increasing the nutrient load to these regions. Proper sitting of structures and waste storage facilities can enhance dispersion and dilution of odorous gases. Enclosing waste storage or treatment facilities can reduce gaseous emissions from AFO in areas with residential development in the region.

For an odor to be detected downwind, odorous compounds must be (a) formed, (b) released to the atmosphere, and (c) transported to the receptor site. These three steps provide the basis for most odor control. If any one of the steps is inhibited, the odor will diminish.

A. Growing and Storage Facilities

Odor problems can be prevented or reduced through adequate drainage, runoff management, proper care to keep animals and animal facilities clean and dry, and appropriate animal by-product removal, handling, and transport.

Locate animal by-product management facilities and utilization areas as far as practical from neighboring residences, recreational areas, or other conflicting land uses. Avoid sites where radical shifts in air movement occur between day and night, such as those near large bodies of water or steep topography. A component's location in relation to surrounding topography may also strongly influence

the transfer of odor because of daily changes in temperature and resulting airflow. To provide optimum conditions, prevailing winds should carry odors away from nearby residences.

Providing conditions or design features that alter the microclimate around specific components can further mitigate odor. An abundance of sunlight and good ventilation helps keep livestock and poultry areas dry and relatively odor free. Southern exposure with adequate slope to provide drainage for runoff is a preferred condition. Keeping animal by-products aerated and at appropriate moisture and temperature levels slows the development of anaerobic conditions and reduces odor.

B. Mitigation of Odor

Odor-causing substances from animal by-products are frequently attracted to dust particles in the air. Collecting or limiting the transport of dust aids in reducing odor. Vegetation is very effective in trapping dust particles. For example, pine trees planted downwind trap odor-laden dust particles and can provide a visual barrier to the animal operation. In addition, vegetation, landform, and structures can channel wind to carry odors away from nearby residences.

Chemical additives for the control or reduction of odors may be added to the bedding in the house or during removal.

C. To reduce Odor Problems during Spreading

1. Avoid spreading when wind will blow towards populated areas.
2. Avoid spreading just before weekends and holidays when people are more likely to be outdoors.
3. Spread in the morning when the air is warming and rising, rather than in the afternoon.
4. Animal waste applied to the soil surface should be incorporated within 24 hours of application to reduce odor, minimize surface runoff and maximize nutrient availability to the subsequent crop. Optimum incorporation time is 12 hours.
5. Injection of animal wastes beneath the soil surface is the preferred method of application.

D. Safety

1. Fencing should be provided to prevent livestock and people from entering the agriculture waste facility.
2. All waste storage structures must be posted with a ~caution~ sign Example- **DANGER - KEEP OUT.** If you do not have a sign, one can be provided.
3. Manure produces gases - caution should be taken so as not to be overcome by such gases *(Gas masks are not adequate protection).

E. Structure Maintenance*

1. Check backfill areas around structure (concrete, steel, timber, etc) often 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. Refer to safety items Part A above.
2. Check walls and floors often - minimum of 2 times a year when facility is empty - for cracks and/or separations. Make needed repairs immediately. Refer to safety items Part A above.
3. 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. Refer to safety items Part A above, when planning and making repairs.

4. 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 vegetative is damaged, berms and embankments will need to be re-vegetated as soon as possible.
5. Fences should be inspected and maintained in order to exclude livestock from the berms and embankments and to exclude unauthorized entry by people.
6. 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.
7. Check frequently for burrowing animals around buildings, structures, and in the berms and embankments. Remove them when they are found and repair any damage.
8. Inspect haul roads and approaches to and from the storage facility frequently to determine the need for stone, gravel or other stabilizing material.
9. Do not allow runoff from loading areas and from spills to flow into streams or road ditches.
10. Examine and repair all warning and hazard signs as needed.
11. Install and maintain a marking gauge post, which clearly shows the design levels of one-half and full for manure storage pits, ponds, and lagoons.
12. Clear blockages from roof gutters and outlets as needed.
13. Landowner should notify the Soil Conservation District of any major problems or repairs needed.
14. Roof of feed area must be maintained and operate as intended for the life of the practice (15 years). The function of the roof is critical since the manure storage facility is sized accordingly.

F. Miscellaneous

1. A Soil Conservation District representative will make an annual inspection.
2. Owner/operator fully understands that cost-share agencies can ask for a refund of money received, if an operation and maintenance plan is not followed by the owner/operator.

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; 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 recordkeeping requirement.

The Nutrient Management Plan, looks at all generated nutrients on the farm. A Summary of Recommendations reflects the nutrient applications to cropland and pasture.

Maps of the Agricultural Operation

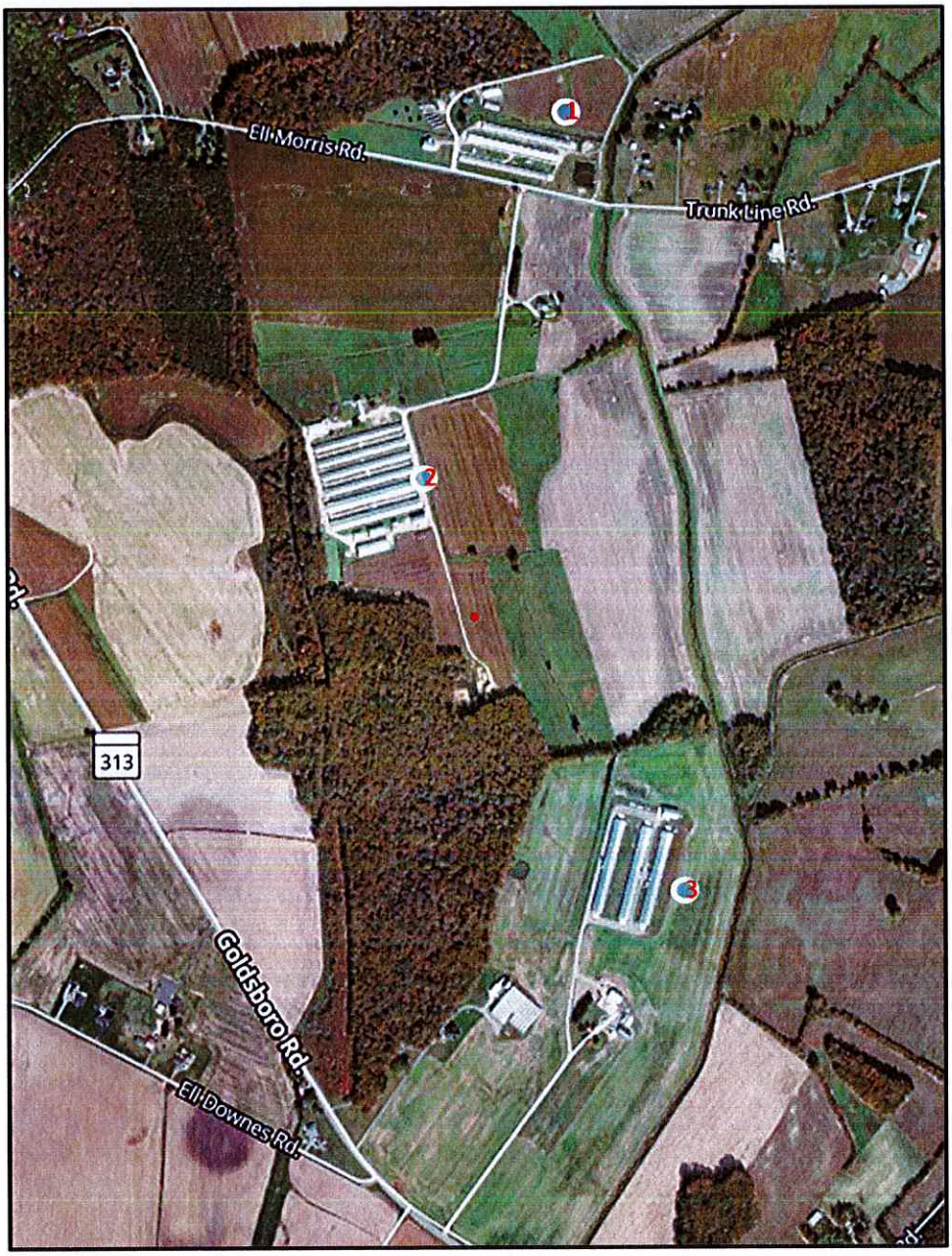
Maryland Sites (3)

1. 110 FERRELL FARM LANE, INGLESIDE, MD

2. MAE-VUE, 450 ELL MORRIS ROAD, HENDERSON, MD

3. Long Marsh, 3575 GOLDSBORO ROAD, HENDERSON, MD

LOCATION MAP



Production Facility Site Sketch/Data

FARMSTEAD (Production Areas)

This element addresses the components and activities, existing and planned, associated with the production facility, feedlot, manure and wastewater storage and treatment structures and areas, and any area used to facilitate transfer of manure and wastewater.

Site	MDE AI#	Site Name	Address
1	66799	Alan C. Eck Farm (Ferrell)	110 Farrell Farm Lane

Alan C. Eck Farm (Ferrell)

	Site 1
Animal Type	Roasters
Number of Animals (Capacity of each Structure):	House 1: 27,500 House 2: 27,500 House 3: 27,500 4.5 flocks per year

Number of Structures (Per Animal Type)	Total of 3 (each house measures 42' x 604')
Time In Location:	Year round
Manure Storage	Roofed Structure 40' x 92' 18,400 cuft (409 ton)
Litter Amount Generated/Collected	609 ton
Manure Uncollected (pasture accesses)	0

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

Description of nearby Water Bodies

The farmstead and production area sits within the Tuckahoe Creek Watershed. All production areas, manure storage, manure cleanup - heavy use areas, and mortality management is at a minimum of 200' from any Public Drainage Ditches (PDAs) and/or Streams, Creeks, or Rivers. **The farm operation is in a Tier II Watershed.**

Farm Name	Name of nearest Waterbody	Distance to Waterbody	Watershed Name	12-digit Watershed number	Water Quality Status TMDL impairments (N, P, Bacteria, Sediment)
Farrell	*Mason Branch*	*200 ft*	*Tuckahoe Creek*	*021304050537*	*Nitrogen Phosphorus Bacteria Sediment*

Sensitive Environmental Areas

Briefly describe any sensitive environmental areas on the farm including streams, wetlands, HEL land, hydric soils, 100 year floodplain, and distance to regulatory waters.

No sensitive areas were being impacted or diminished by farming activities at the time of the site visits. All required setbacks are outlined in this plan. The nearest body of water is >100 feet from the production facility. The production areas are outside of the 100 year floodplain.

Environmental Justice (EJ) Score

The EJ Score is an overall evaluation of an area's environment and existing environmental justice indicators; including pollution burden exposure, pollution burden environmental effects, sensitive populations, and socioeconomic factors. **This location's score is 48.05 percentile.**

The Resource Concern Identification Worksheet is in the Appendix of this document.

Site	MDE AI#	Site Name	Address
2	66799 (old number 130943)	MAE-VUE	450 ELL MORRIS ROAD, HENDERSON, MD

MAE-VUE

	Site 2
Animal Type	Roasters

Number of Animals (Capacity of each Structure):	House 1-4 27,000 each House 5-6 40,000 each
Number of Structures (Per Animal Type)	Total of 6 1, 2, 3, 4 (42'x604') 5, 6 Psalms (60'x604')
Time In Location:	Year round
Manure Storage	Roofed Structure 40' x 108' 20,400 cuft (453 ton)
Litter Amount Generated/Collected	728 ton
Manure Uncollected (pasture accesses)	0

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

Other Livestock

LOCATION	450 Ell Morris Road T6188
Animal Type	Swine
Average Weight	300
Total # of Animals	1200
Total Day Equivalents Confined per year*	365
Total Day Equivalents Unconfined per year*	0
Collected Solid Manure (tons)*	749
Uncollected Solid Manure (tons)*	0
Volume of Solid/Liquid Manure Storage (cubic feet)*	0

Description of nearby Water Bodies

The farmstead and production area sits within the Tuckahoe Creek Watershed. All production areas, manure storage, manure cleanup - heavy use areas, and mortality management is at a minimum of 150' from any Public Drainage Ditches (PDAs) and/or Streams, Creeks, or Rivers. **The farm operation is in a Tier II Watershed.**

Farm Name	Name of nearest Waterbody	Distance to Waterbody	Watershed Name	12-digit Watershed number	Water Quality Status TMDL impairments (N, P, Bacteria, Sediment)
MAE-VUE	*Mason Branch*	*150 ft*	*Tuckahoe Creek*	*021304050537*	*Nitrogen Phosphorus Bacteria Sediment*

Sensitive Environmental Areas

Briefly describe any sensitive environmental areas on the farm including streams, wetlands, HEL land, hydric soils, 100 year floodplain, and distance to regulatory waters.

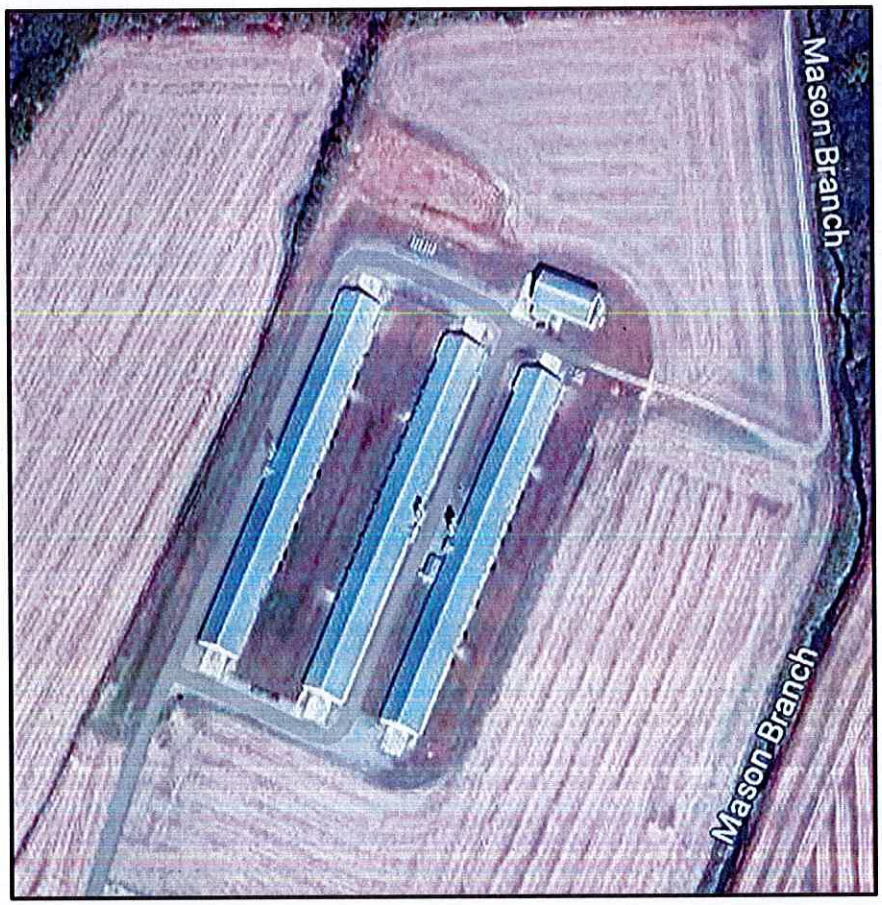
No sensitive areas were being impacted or diminished by farming activities at the time of the site visits. All required setbacks are outlined in this plan. The nearest body of water is >100 feet from the production facility. The production areas are outside of the 100 year floodplain.

Environmental Justice (EJ) Score

The EJ Score is an overall evaluation of an area's environment and existing environmental justice indicators; including pollution burden exposure, pollution burden environmental effects, sensitive populations, and socioeconomic factors. **This location's score is 48.05 percentile.**

The Resource Concern Identification Worksheet is in the Appendix of this document.

Site	MDE AI#	Site Name	Address
3	66799 (old number 151587)	Long Marsh	3575 Goldsboro Road, Henderson, MD



Long Marsh

	Site 3
Animal Type	Roasters
Number of Animals (Capacity of each Structure):	36,000 birds per house
Number of Structures (Per Animal Type)	Total of 3 House 1,2, and 3 (63' x 600')
Time In Location:	Year round
Manure Storage	Roofed Structure 50' x 98' 23,000 cuft (511 ton)
Litter Amount Generated/Collected	732 ton
Manure Uncollected (pasture accesses)	0

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

Description of nearby Water Bodies

The farmstead and production area sits within the Tuckahoe Creek Watershed. All production areas, manure storage, manure cleanup - heavy use areas, and mortality management is 300' from any Public Drainage Ditches (PDAs) and/or Streams, Creeks, or Rivers. **The farm operation is in a Tier II Watershed.**

Farm Name	Name of nearest Waterbody	Distance to Waterbody	Watershed Name	12-digit Watershed number	Water Quality Status TMDL impairments (N, P, Bacteria, Sediment)
Long Marsh	*Mason Branch*	*300 ft*	*Tuckahoe Creek*	*021304050537*	*Nitrogen Phosphorus Bacteria Sediment*

Sensitive Environmental Areas

Briefly describe any sensitive environmental areas on the farm including streams, wetlands, HEL land, hydric soils, 100 year floodplain, and distance to regulatory waters.

No sensitive areas were being impacted or diminished by farming activities at the time of the site visits. All required setbacks are outlined in this plan. The nearest body of water is >100 feet from the production facility. The production areas are outside of the 100 year floodplain.

Environmental Justice (EJ) Score

The EJ Score is an overall evaluation of an area's environment and existing environmental justice indicators; including pollution burden exposure, pollution burden environmental effects, sensitive populations, and socioeconomic factors. **This location's score is 48.05 percentile.**

The Resource Concern Identification Worksheet is in the Appendix of this document.

Concentrated Livestock Areas

No outdoor animal concentration areas exist.

Stormwater Management

Stormwater comes off the poultry house roofs and is sloped away from the buildings. In the operation, ALL of the stormwater pathways are in vigorous sod and are in good condition.

Manure Management and Storage Facilities

Storage ID	Size/Volume of Storage Unit	Type and Style Liner	Condition and Thickness of Liner	Meets 313[1] (Y / N / ?)	Length (days)
1 – Ferrell	12' deep x 120' (930,000 gal)	Egg wash water - Concrete	Good	Y	180
2 – MAE VUE	Under floor basement Storage 530' x 50' x 8' (7x)	Manure - Concrete	Good	?	300
3 – Long Marsh	200' x 80' x 8'	Water impoundment - Earth	Good	?	250

[1] *Was the manure storage system designed and constructed in accordance with NRCS standards in place at time of construction?* ☐*Yes* ☐*No* ☒*Unknown)*

Stacking Areas

No outside stacking areas exist. No long-term manure stacking is conducted. All manure stays in manure storage or under production floor until arrangements for truck export is obtained.

Resource Concerns: N/A

Wells

Document any observed risks such as proximity to contamination sources, surface runoff near well, well condition or unused wells that are not properly abandoned.

Well ID	Depth		Type of Construction	Condition	Test Results (Nitrate/Bacteria)
	Well	Water			
1 – Ferrell	> 100 ft	Good	Traditional	Good	
2 – MAU-VUE	> 200 ft	Good	Traditional	Good	
3 – Long Marsh	>100 ft	Good	Traditional	Good	

Surface Water Runoff

The areas that surface water flows through, is handled in thick vegetation. Ditches prevent water from entering buildings and directs storm flows out of the Headquarters and away from production.

Air Quality

Are any of the following a concern at the facility itself, or to nearby neighbors? If so, describe the issues in terms of timing, extent, etc.

- **Dust:** normal levels for a layer house ventilation system
- **Gaseous Emissions:** No
- **Odor:** Normal.
- **Other Potential Resource Concerns:** No other problems are apparent.

Production Area Management Guidelines for Poultry Operations

To provide environmental benefits, conservation practices must be operated and maintained as designed. The following list describes some common problems to look for in the production area of poultry operations. **It is VERY IMPORTANT that the production area (manure storage, composters, HUA pads, etc...) be kept clean and free from ANY manure that could come in contact with surface water.** Natural Resources Conservation Service (NRCS) and Soil Conservation District staff are available to provide follow-up assistance if needed.

Manure Storage Area

Manure removed from poultry houses should be stored in a covered shed until it can be applied to crops or otherwise used. The following are potential problems you may see that MUST be addressed to keep clean water on your farm, clean:

- Manure piled outside shed.
- Manure stacked too high against walls.
- Shed contains equipment or supplies that are not easily moveable (e.g., not on wheels).
- Obvious surface water conveyance near the open ends of the shed to a drainage ditch or swale.
- Structural damage to shed.
- Evidence of water or "puddling" in the storage shed.

Composters

Properly operated composters provide an environmentally sound method for disposing of normal mortality from poultry houses.

The following are potential problems you may see:

- Leakage.
- Excessive odor or flies.
- Dead birds visible.
- Evidence of animals feeding on dead birds.
- Thermometer not readily available (DE only).
- Recipe sign not posted (DE only).
- Missing or broken boards.
- Misuse and nonuse. Composter should be used for what it was intended for.

Concrete Pads

Concrete pads at the ends of poultry houses and manure sheds can reduce erosion and protect surface and ground water from contamination.

Concrete pads should be properly installed, maintained, and kept clean of manure.

The following are potential problems you may see:

- Manure present on pads.
- Obvious surface water conveyance to a drainage ditch or swale near the open ends of poultry houses and manure sheds.
- Concrete cracking or breaking off.

Proper and maintained Vegetation Around Production Area and Between Houses

It is very important to have good grass cover around the farm buildings and between the poultry houses. Well established grasses also prevent soil erosion which in severe cases could result in damage to the house pad or the footing and foundation of the poultry house. Grass also helps reduce reflected heat

which in turn helps keep house temperatures under control in hot weather. Grass should always be kept mowed and weeds should also be kept under control. Not only are un-mowed weeds and grass unsightly, but they can encourage rodents and can also reduce the effectiveness of natural ventilation. Tall weeds and grass provide rats and mice a place to hide that is close to the building. Most rodent control programs will stress the need to keep areas around buildings mowed frequently.

Standing puddles of water encourage mosquitoes and kill vegetation, so low spots should be filled to prevent such problems. Also, drainage ditches, drainage ways, and swales should be properly mowed and maintained to give storm water an easy exit. Any trash and debris should be removed from ditches and grass and weeds kept short to encourage water flow.

Windbreak/Shelterbelt

Windbreaks, or vegetative environmental buffers, are planted around poultry houses to provide shelter from winter winds; reduce particulates, ammonia, and other odors from tunnel fans; create visual screens; and provide shade to reduce extreme summer heat.

The following are potential problems you may see:

- Trees dead, dying, or damaged (e.g., broken off, mowed over, bagworms, etc.).
- Lack of weed control around trees or insect control.
- Irrigation system not functioning (e.g., major leaks, broken lines, etc.).
- No irrigation system (newly established trees should be irrigated for the first 2-3 years).

Other Concerns

Other issues that may result in environmental concerns include, but are not limited to:

- Manure scattered around the production area on roads, along the edge of concrete pads or building foundations.
- Manure runoff visible.
- Roof runoff that is creating erosion or drainage problems.
- Lack of good vegetative cover for filtering storm runoff between waste storage structures, composters, or ends of the poultry houses, and drainage outlets.
- Overall farm appearance (a farm that "looks good" is less likely to generate complaints from neighbors).
- **Potholes in travelways or standing water in swales, near exhaust fans.**
- Maintenance of stormwater management structures or ponds.

NUTRIENT MANAGEMENT PLAN

Nutrient Management

Nutrients (Manure, Wastewater, and Commercial Fertilizers)

This element addresses the Nutrient Management component of the CNMP. The nutrient management plan is developed by a certified nutrient management consultant, certified by the Maryland Department of Agriculture (MDA). The nutrient management plan is a planning tool to increase the efficiency of all nutrients including manure, wastewater and commercial fertilizer used for crop production, while reducing environmental risk and ultimately increasing profit.

Purpose and Intent of Nutrient Management

The goal of the Nutrient Management Plan (NMP) is to develop a nutrient budget for nitrogen, phosphorus, and potassium that includes all nutrient sources. From this nutrient budget, projections will be made concerning the sustainability of the plan for the entire crop sequence. In most cases, the nutrient budget is accurate for the first year only. If nutrients from sources not included in this plan and are used in the first year, the nutrient budget will be revised to account for those inputs. In subsequent years considered in this plan, a nutrient budget will be developed using current soil analysis data; current manure analysis data; the actual crops to be used and their projected yields and nutrient needs and will account for nutrients from all sources. Guidance in developing a nutrient budget may be obtained from your NRCS Field Office or your University of Maryland Cooperative Extension Service Agent. Land application procedures must be planned and implemented in a way that minimizes potential adverse impacts to the environment and public health.

Nitrogen and Phosphorus Transport and Water Quality Impairment

The potential for plant nutrients to migrate to surface and groundwater is largely depending upon soil and site conditions. Any combination of soil/site conditions that leads to rapid runoff of rapid movement of rainfall through the soil will lead to water quality risks from almost any land use practice. Excessive Nitrogen and Phosphorus concentrations in surface waters generally affect water quality by supplying nutrients to phytoplankton, which are small aquatic plants that grow suspended in water and include various types of algae. The same forms of these nutrients, which are available to crops, are also available to phytoplankton. Taste and odor problems often occur in drinking water because of excessive algae blooms in surface water.

Most annual cropping systems show a direct and marked yield response to fertilizer N applied to non-legume crops. While leaching losses are the major environmental threat from N, runoff losses are also possible. The potential for each system to contribute N to surface waters will be directly dependant upon its erosion potential coupled with fertilizer application practices. Nitrogen is lost to surface waters primarily from recently applied inorganic fertilizers. The major water quality concerns associated with

land application of organic wastes is the direct runoff of the organic material into surface waters and then migration to groundwater.

Phosphorus is the second major element utilized by actively growing plants but differs from Nitrogen. P is very immobile in soil and seldom migrates downward because it is strongly absorbed by the soil particle. The risk of groundwater contamination by P from crop production systems is limited, however the solid forms pf P that accumulates in surface soil are subject to loss via erosion. Runoff losses to surface waters are the major water quality risk from P. Where erosion risk increases, such as for annual crops with conventional tillage, the total P loss increases greatly as the P is moved in solid form with the eroding soil.

Nutrient Management Plan

The Nutrient Management Plan describes a nutrient budget for nitrogen, phosphorous and potassium that considers all potential sources of nutrients including (but not limited to) animal manure, organic by-products, wastewater, commercial fertilizer, crop residues, legume credit and irrigation water. The NMP is developed by an MDA certified nutrient management consultant who has the education and experience to formulate field-specific nutrient recommendations based on field histories, soil and manure test data, realistic yield expectations, crop nutrient requirements, preferred nutrient sources and timing and method of nutrient application.

Plan Maintenance, Updates or Revisions

According to MDA, NMP's must be updated before they expire or at least once every 3 years. The NMP should be updated each year to account for any factors such as: changes in crop rotation, legume and/or manure Nitrogen credits and changes in the amount of manure generated. Changes in your agricultural operation may require you to modify or update your plan sooner. Your Nutrient Management Plan should be updated if any of the following situations occur:

1. A change to the planned crop or cropping rotation or introduction of new crop not currently addressed in this nutrient management plan, unless the new crop will have fertility management similar to that originally planned.
2. A change of nutrient source or soil test results that indicate a change in nutrient recommendations.
3. A change in acreage managed of 10 percent or greater, or 30 acres, whichever is less.
4. A change in animal units of 10 percent or greater if resultant manure production will require significant management adjustments.

Nutrient Management Plan Annual Implementation Report

The Maryland Department of Agriculture requires that all farm operators submit an Annual Nutrient Application Annual report on all farm(s) under the Nutrient Management Plan. For information

regarding the Annual Report submittal requirements and time-frame contact your Regional Nutrient Management office or Maryland's Nutrient Management Program at 410-841-5959.

Minimum Setback Distances from Sensitive Areas

Type of Sensitive - Setback Area	Setbacks based on Methods of Applications		Notes
	Surface Application	Surface Incorporation w/in 24 Hours	
Residence/Business/Property Lines	100 ft (or alternative w/ the consent of adjacent property owner)	100 ft (or alternative w/ the consent of adjacent property owner)	
Sinkholes	100 ft	100 ft	
Perennial/Intermittent Streams & Ditches; Pond or Lake	100 ft, or use a minimum 35 ft vegetated buffer strip adjacent to stream	100 ft, or use a minimum 35 ft vegetated buffer strip adjacent to stream	
Grassed Waterway	35 ft	35 ft	
Private Well and Springs	100 ft	100 ft	
Public Well	200 ft	200 ft	
Public Surface Drinking Water Intake	200 ft	200 ft	
Field application of animal waste shall not take place on frozen ground or snow covered ground without written permission from the Department; which may be granted if an imminent storage failure or other dire emergency exists.			
An Animal Feeding Operation (AFO) will maintain a setback of 100' or a 35' vegetated filter strip between stored manure (which includes crust-outs and poultry litter) and waters of the state, including field ditches.			

No specific criteria, see NMP for application rates and details.

Feed Management Considerations

Feed management activities may be used to reduce the nutrient content of manure, which may result in less land being required to effectively utilize the manure. Feed management activities may be dealt with as a planning consideration and not as a requirement that addresses specific criteria; however, AFO owners/operators are encouraged to incorporate feed management as part of their nutrient management strategy. Specific information and recommendations should be obtained from Land Grant Universities such as the University of Maryland, the Agricultural Research Service, or professional societies such as the Federation of Animal Science Societies (FASS) or American Registry of Professional Animal Scientists (ARPAS), or other technically qualified entities. Specific feed management activities to address nutrient reduction in manure may include phase feeding, amino acid supplemented low crude protein diets, and the use of low phytin phosphorus grain and enzymes, such as phytase or other additives. Feed management can be an effective approach to addressing excess nutrient production and should be encouraged; however, it is also recognized that feed management may not be a viable or acceptable alternative for all AFO. A professional animal nutritionist should be consulted before making any recommendations associated with feed ration adjustment.

Other Utilization Activities

If this element of the CNMP should be presented as a consideration for the AFO owner and/or operator in his/her decision-making process, a statement of action would be presented below in a table format.

Using environmentally safe alternatives to land application of manure and organic by-products should be an integral part of the overall CNMP. Alternative uses for animal manure are needed in areas where nutrient supply exceeds the nutrient requirements of crops, and/or where land application would cause significant environmental risk. Manure use for energy production, including burning, methane generation, and conversion to other fuels, is being investigated and even commercially tested as a viable source of energy. Methods to reduce the weight, volume, or form of manure, such as composting or pelletizing, can reduce transportation cost, and create a more valuable product. Manure can be mixed or co-composted with industrial or municipal by-products to produce value-added material for specialized uses. Transportation options are needed to move manure from areas of over supply to areas with nutrient deficiencies (i.e., manure brokering).

REQUIRED RECORD KEEPING

& Nutrient Management Requirements

(SEE THE TEMPLATES

WHICH FOLLOW)

Record Keeping

It is important that records are kept to effectively document and demonstrate implementation activities associated with CNMPs. Documentation of management and implementation activities associated with a CNMP provides valuable benchmark information for the producer that can be used to adjust his/her CNMP to better meet production objectives. It is the responsibility of AFO owners/operators to maintain records that document the implementation of CNMPs.

CNMP requires that the producer maintain these records for no less than 5 years. Maryland State regulations require that the Nutrient Management Plan records be maintained for a minimum of 5 years as well (see Maryland State Nutrient Management Requirements of this section). It is the producer's responsibility to ascertain the minimum time required for archiving the records listed below. In some cases, if certain USDA programs are in effect, the records may need to be kept as long as fifteen years. In addition, if this operation requires a CAFO permit, annual reporting may be necessary.

Records may be kept in a number of ways:

- Record Forms are available from the NRCS.
- Record forms may be obtained from University of Maryland Extension Office or from the MDA Nutrient Management Program.
- You may develop your own records system provided that all necessary information is included.

Land Application Record Keeping.

Record Keeping (Maintain for 5 years)

Maintaining records to document plan implementation. As applicable, records include:

- ❑ Soil test results and recommendations for nutrient application.
- ❑ Quantities, analyses and sources of nutrients and manure applied.
- ❑ Manure Transfer/Export Events
- ❑ Dates and methods of nutrient and manure applications.
- ❑ Crops planted, planting and harvest dates, yields, and crop residues removed.
- ❑ Results of water, plant, and organic by-product analyses.
- ❑ Dates of review and person performing the review, and recommendations that resulted from the review.

Operation and Maintenance

a. Review the Manure and Nutrient Management Plan component annually and make adjustments when needed.
b. Calibrate application equipment to ensure uniform distribution and accurate application rates (SEE SECTION 13).

c. Inspect and repair manure hauling and application equipment to minimize potential of accidental spillage.
d. Protect fertilizer storage areas from weather to minimize runoff, leakage, and lost of material.
e. Avoid unnecessary exposure to fertilizer and organic waste (bio-solids), and wear protective clothing when necessary.
f. Observe set backs required for nutrient applications (specified in this plan) adjacent to water bodies, drainageways, sink holes, and other sensitive areas.
g. Maintain records of manure and nutrient applications for 5 years (SEE SECTION 6).
h. Clean up residual materials from equipment and dispose of properly.

Summary:

The development of this Plan only applies to the fields and conditions stated in the Plan. If changes occur in your livestock operations or fields contact the NRCS/SWCD Office or your Technical Service Provider to get this Plan revised.

Documentation of Records

The Table below shows which of the CNMP records which may be required by MD NRCS. Operators should maintain these records to document plan implementation. As applicable, records include:

Item	Report Details	Frequency	Documentation	Maryland Records Kept For:	Required by MD NRCS?
Monthly Animal and Mortality Count		Monthly	Suggested format available	5 Years	Y
Calibration Record for Spreading Equipment		Annually	Suggested format available	Two Most Recent Records	Y
Soil test results		Every 3 years	Keep Soil Test Reports	5 Years	Y
Results of Pre-Side Dress Nitrogen or Pre-Plant Soil Nitrate Testing	Any alternative sampling technique used to address specific crop requirements that lead to a change in the applied amounts should be documented.	As needed	Keep Test Reports	5 Years	Not Required
Plant Tissue Testing Results	If analysis is used in allocation decisions these results should be maintained	As needed	Keep Test Reports	5 Years	Not Required
Manure Nutrient Analysis	A manure analysis should be completed annually, for each manure storage containment and prior to application. It is essential that a recent analysis be	Annual	Suggested format available or Keep Test Reports	5 Years	Y

	used when updating the nutrient management plan.				
Events associated with manure storage and containment structures (e.g. manure transfer overflow events)	Dates of emptying, level before emptying, and level after emptying Discharge or overflow events, level before and after event	Event Driven	Suggested format available	5 Years	Y
Spill Response	Activities associated with emergency spill response plan.	Event Driven	Suggested format available	5 Years	Y
Crop records	Crops planted and planting/harvesting dates, by field.	Event Driven	Suggested format included	5 Years	Y
Nutrient Application Summary by Field	Nutrient Application records for each application event, including commercial fertilizers that are applied to supplement manure.	Event Driven	Suggested format included	5 Years	Y
Transfer of manure offsite to third parties	Records should include: a. Manure nutrient content b. Amount of manure transferred c. Date of transfer d. Recipient of manure	Event Driven	Suggested format available	5 Years	Y
Reviews by third parties	Records associated with any reviews by NRCS, third-party consultants, or representatives of regulatory agencies:	Scheduled	Suggested format available	5 Years	Not required
Maintenance Records	Records of maintenance performed associated with operation and maintenance plans.	Scheduled Maintenance and Event Driven	Suggested format available	5 Years	Y
Changes Made In CNMP	Some changes to the CNMP will not require a new plan to be created, other decisions will. Ask your local NRCS Field Office Personnel for information regarding changes to this CNMP.	Any actual operational or management variation from the original CNMP must be documented	Suggested format available	5 Years	Y

Animal Facility Management Plan	Records associated with Animal Facility Management Plan	Duration of plan developed or when changes are made to CNMP (See NRCS Field Office)	CNMP	As long as facility is in operation	Y
Nutrient Management Plan	State of Maryland requires the NMP and implementation of NMP records be kept.	Duration of Plan Developed	NMP	5 years	Y (Also required by MDA)

Note: Y = Yes

Maryland Department of Agriculture Nutrient Management Requirements

Plan Implementation Records

MDA may periodically review the records of your agricultural operation. Regulations supporting the *Water Quality Improvement Act of 1998* outline the process for the evaluation and implementation of a nutrient management plan. Maintaining records to document plan implantation is the responsibility of the operator. Listed below are items needed for a Maryland Nutrient Management (on-farm) inspection of your nutrient management plan:

- ❑ All nutrient management plans and updates for the past 3 years.
- ❑ A record of crops and actual yields for the past 5 years.
- ❑ Analysis of nutrients (all forms) applied to plants and/or crop acreage.
- ❑ Soil/Manure analysis results for the entire agricultural operation.
- ❑ Receipts related to the purchase of nutrients.
- ❑ Documentation of when and where nutrients were applied to specific fields; in reference to amounts, farm, field and location.
- ❑ Documentation to justify any changes from the nutrient management plan as written.

Nutrient Management Plan Annual Implementation Report

The Maryland Department of Agriculture requires that all farm operators submit an Annual Nutrient Application Annual report on all farm(s) under the Nutrient Management Plan. For more information regarding the Annual Report submittal requirements and time-frame, contact Maryland's Nutrient Management Program at 410-841-5959.

Nutrient Applicator Voucher

If operator is an applicator of nutrients of 10 or more acres; the operator must possess a CURRENT Maryland Nutrient Applicator's Voucher or be a Certified Nutrient Management Consultant. For more information regarding applicator voucher requirements, contact Maryland's Nutrient Management Program at 410-841-5959.

Manure Analysis Sampling Procedures

Solid Manure (Dairy, Beef, Swine, Poultry)

Collect a composite sample by following one of the procedures listed below. A method for mixing a composite sample is to pile the manure and then shovel from the outside to the inside of the pile until well mixed. Fill a one-gallon plastic heavy-duty zip lock bag approximately one-half full with the composite sample, squeeze out excess air, close and seal. Store sample in freezer if not delivered to the laboratory immediately.

Procedure 1. Sampling while loading - *Recommended method for sampling from a stack or bedded pack.* Take at least ten samples while loading several spreader loads and combine to form one composite sample. Thoroughly mix the composite sample and take an approximately one pound sub sample using a one-gallon plastic bag. *Sampling directly from a stack or bedded pack is not recommended.*

Procedure 2. Sampling during spreading - Spread a tarp in field and catch the manure from one pass. Sample from several locations and create a composite sample. Thoroughly mix the composite sample together and take a one-pound sub sample using a one-gallon plastic bag.

Procedure 3. Sampling daily haul - Place a five-gallon bucket under the barn cleaner 4-5 times while loading a spreader. Thoroughly mix the composite sample together and take a one-pound sub sample using a one-gallon plastic bag. Repeat sampling 2-3 times over a period of time and test separately to determine variability.

Procedure 4. Sampling poultry in-house - Collect 8-10 samples from throughout the house to the depth the litter will be removed. Samples near feeders and waterers may not be indicative of the entire house and sub samples taken near here should be proportionate to their space occupied in the whole house. Mix the samples well in a five-gallon pail and take a one-pound sub sample, place it in a one-gallon zip lock bag.

Procedure 5. Sampling stockpiled litter - Take ten sub samples from different locations around the pile at least 18 inches below the surface. Mix in a five-gallon pail and place a one-pound composite sample in a gallon zip lock bag.

Sample Identification and Delivery

Identify the sample container with information regarding the farm, animal species and date. This information should also be included on the sample information sheet along with application method, which is important in determining first year availability of nitrogen.

Keep all manure samples frozen until shipped or delivered to a laboratory. Ship early in the week (Mon.-Wed.) and avoid holidays and weekends.

Nutrient Application Equipment Calibration:

Commercial Fertilizer Application Equipment Calibration:

The nitrogen applicator, the commercial broadcast spreaders, and corn planter will be set per the manufacturers recommendations then filled with a known amount and checked over known acreage. Adjustments will be made to achieve the planned rates.

Manure Spreader Calibration

There are several methods that can be used to calibrate the application rate of a manure spreader. The two best methods are the load-area method and the plastic sheet method. It is desirable to repeat the calibration procedure 2 to 3 times and average the results to establish a more accurate calibration.

Before calibrating a manure spreader, the spreader settings such as splash plates should be adjusted so that the spread is uniform. Most spreaders tend to deposit more manure near the spreader than at the edge of the spread pattern. Overlapping can make the overall application more uniform. Calibrating of application rates when overlapping requires measuring the width of two spreads and dividing by two to get the effective spread width.

Calibration should take place annually or whenever manure is being applied from a different source or consistency.

Load-Area Method

The load-area method is the most accurate and can be used for most types of manure handling. This method consists of determining the amount (volume or weight) of manure in a spreader and the total area over which it is applied. The most accurate method to determine the amount of manure in a spreader is to weigh the spreader when it is full of manure and again when it is empty (portable pad scales work well for this). The difference is the quantity of manure applied over the area covered. Spreader capacities listed by the manufacturers can be used to determine the amount of manure in the spreader. However care must be taken when using manufactures spreader capacities. Heaped loads, loading methods and manure type may vary considerably from what is listed by manufacturers of box and side delivery manure spreaders. Spreader capacities for liquid tankers are accurate provided the tanker is filled to the manufactures recommended levels, and no foam is present in the tank.

The area of spread is determined from measuring the length and width of the spread pattern. Measuring can be done with a measuring wheel, measuring tape or by pacing.

The application rate is calculated using the following formula:

$$\frac{\text{Spreader capacity (tons or gallons)} \times 43560 \text{ sq. ft/acre}}{\text{Distance traveled} \times \text{Spreading width}} = \text{Application Rate tons or Gallons/Acre}$$

Plastic Sheet Method

The plastic sheet method can only be used with solid or semi-solid manure. This method of calibrating spreader application rates involves 1) cutting a plastic sheet to the specified dimensions (56 inches X 56

inches), 2) weighing the clean plastic sheet, 3) laying out the plastic sheet on the ground and driving the manure spreader (applying manure at a recorded speed and spreader setting) over the sheet, 4) weighing the plastic sheet with the manure on it, and 4) determine the net weight of the manure on the sheet (weight of manure and sheet - weight of the clean sheet), and 5) the net pounds of manure equals tons per acre applied.

When calibrating manure spreaders, all details regarding tractor speed and manure spreader settings and date(s) of each calibration should be recorded with manure application information, and directly on the equipment. Mark equipment to ensure a known application rate is applied each time the referenced tractor speed and spreader settings are used. Manure spreader settings can include such things as: fast and slow settings on some box spreaders, gate position on side delivery spreaders and splash plate position and fill levels on liquid tankers.

Irrigation System Calibration:

Place 3-5 buckets throughout the irrigation spray pattern and collect samples while operating the pump at a given rpm and pressure (for a traveling gun record the ground speed also). At the end of the planned sample period measure the amount of liquid collected in inches (average the samples). The following chart shows how many gallons per acre applied per inch applied.

Gallons applied per inch of liquid manure applied.

Inches Liquid Manure Applied via Irrigation	Gallons per Acre
.20	5,430
.30	8,146
.40	10,860
.50	13,577
.75	20,365
1.0	27,154
1.25	33,942
1.5	40,731

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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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31		
February, 20____		
Day	Initials	√ if Leak Detected
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March, 20____		
Day	Initials	√ if Leak Detected
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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____

Day	Initials	√ if Leak Detected
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July, 20____

Day	Initials	√ if Leak Detected
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August, 20____

Day	Initials	√ if Leak Detected
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September, 20____

Day	Initials	√ if Leak Detected
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October, 20____		
Day	Initials	√ if Leak Detected
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November, 20____		
Day	Initials	√ if Leak Detected
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December, 20____		
Day	Initials	√ if Leak Detected
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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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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)

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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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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						

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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					
Week 9					
Week 10					
Week 11					
Week 12					
Week 13					
Week 14					
Week 15					
Week 16					
Week 17					
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					
Week 24					
Week 25					
Week 26					
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					

Record Keeping - Monthly Animal & Mortality Count

Animal/Type: **Year:**

Production Phase:

Month	Animal Count and Weight	Mortality	Mortality %	Comments
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

APPENDIX

Online References

Maryland Department of the Environment (MDE) Regulations and General Permit for Animal Feeding Operations (AFO)

http://www.mde.state.md.us/programs/Land/SolidWaste/CAFOMAFO/Pages/Programs/LandPrograms/Solid_Waste/cafo/index.aspx

Environmental Protection Agency (EPA) Concentrated Animal Feeding Operations (CAFO) - Final Rule

http://cfpub.epa.gov/npdes/afo/cafofinalrule.cfm

Crop Fertilizer Recommendations

"Soil Fertility Management," Maryland Cooperative Extension, SFM-1, Oct. 2002
http://www.anmp.umd.edu/Pubs/Pubs_Crops.cfm

Nutrient Management Information Sheets

http://www.anmp.umd.edu/Pubs/index.cfm

Manure Nutrient Availability

Maryland Department of Agriculture, COMAR 15.20.08.05
http://www.mda.state.md.us/resource_conservation/nutrient_management/manual/estimated_mineralization_rates.php

Calibrating Manure Spreaders

University of Maryland Extension Fact Sheet 416 and Worksheets
http://www.anmp.umd.edu/Pubs/Pubs_Manure.cfm
http://www.anmp.umd.edu/Pubs/Pubs_Equip.cfm

Phosphorus Assessment

"The Maryland Phosphorus Site Index: An Overview," Maryland Cooperative Extension SFM-6, April 2005
http://www.anmp.umd.edu/files/SFM-6.pdf

"The Maryland Phosphorus Site Index: Technical Users Guide," Maryland Cooperative Extension SFM-7, April 2005
http://www.anmp.umd.edu/files/SFM-7.pdf

Mid-Atlantic Nutrient Management Handbook

http://www.mawaterquality.org/Publications/pubs/manhcomplete.pdf

Maryland Pesticide Regulation

http://www.mda.state.md.us/plants-pests/pesticide_regulation/index.php

Maryland Practice Standards eFOTG Section IV — Practice Standards and Specifications

http://www.nrcs.usda.gov/technical/efotg/

Maryland
Department of
the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

AFO RESOURCE CONCERNS EVALUATION WORKSHEET

Name:	Alan Eck – **110 Ferrell Farm Ln**	**Agency Interest #:**	66799
Planner:	David D. Kann	**Farm # / Tract #:**	
Site Visit Date:	01/25/2024	**Total Acres:**	140
County:	Queen Anne's	**Production Area Acres:**	12 acres

	RESOURCE CONCERN	YES	NO	ASSESSMENT
a.	Biosecurity measures	☐	☒	All precautionary measures are in place and being followed. Visitor restrictions.
b.	Chemical handling	☐	☒	All chemicals are stored in an 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	☐	☒	N/A
e.	Floodplains	☐	☒	This is an existing operation and the production area is not located in the FEMA-100 year floodplain as per online mapping resources.
f.	Gully erosion	☐	☒	No gully erosion was identified in the production area or associated water conveyances.
g.	Livestock travel lanes	☐	☒	N/A
h.	Nutrient discharge	☐	☒	There are no observable nutrient discharges occurring, at the time of the site evaluation, from the production areas.
i.	Objectionable odors	☐	☒	No unusual or excessive odors were observed during the site visit.
j.	Particulate matter emissions	☐	☒	Through ventilation fans, typical levels. Grass filters in place to harbor and treat emissions.
k.	Ponding, flooding, seasonal high water table	☐	☒	No issues were identified during the site visit.
l.	Sediment	☐	☒	No obvious and observable sediment discharges are occurring from the production areas.
m.	Streambank/shoreline erosion	☐	☒	None present.
n.	Threatened/endangered species	☐	☒	No geospatial indicators have been identified on the production area.
o.	Waste storage	☐	☒	There are no resource concerns identified with the waste storage. Roofed manure shed being managed appropriately.
p.	Waterways	☐	☒	In good vigorous sod. All water conveyances are being managed appropriately.
q.	Wetlands	☐	☒	Production area and manageable prior converted cropland are either 100 feet from wetlands or skirted with vegetation and the required setbacks are in place to protect these resources.

Maryland
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Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

AFO RESOURCE CONCERNS EVALUATION WORKSHEET

Name:	Alan Eck – **450 Ell Morris Road**	**Agency Interest #:**	130943
Planner:	David D. Kann	**Farm # / Tract #:**	
Site Visit Date:	01/25/2024	**Total Acres:**	179
County:	Queen Anne's	**Production Area Acres:**	21 acres

	RESOURCE CONCERN	YES	NO	ASSESSMENT
a.	Biosecurity measures	☐	☒	All precautionary measures are in place and being followed. Visitor restrictions.
b.	Chemical handling	☐	☒	All chemicals are stored in an 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	☐	☒	N/A
e.	Floodplains	☐	☒	This is an existing operation and the production area is not located in the FEMA-100 year floodplain as per online mapping resources.
f.	Gully erosion	☐	☒	No gully erosion was identified in the production area or associated water conveyances.
g.	Livestock travel lanes	☐	☒	N/A
h.	Nutrient discharge	☐	☒	There are no observable nutrient discharges occurring, at the time of the site evaluation, from the production areas.
i.	Objectionable odors	☐	☒	No unusual or excessive odors were observed during the site visit.
j.	Particulate matter emissions	☐	☒	Through ventilation fans, typical levels. Grass filters in place to harbor and treat emissions.
k.	Ponding, flooding, seasonal high water table	☐	☒	No issues were identified during the site visit.
l.	Sediment	☐	☒	No obvious and observable sediment discharges are occurring from the production areas.
m.	Streambank/shoreline erosion	☐	☒	None present.
n.	Threatened/endangered species	☐	☒	No geospatial indicators have been identified on the production area.
o.	Waste storage	☐	☒	There are no resource concerns identified with the waste storage. Roofed manure shed being managed appropriately.
p.	Waterways	☐	☒	In good vigorous sod. All water conveyances are being managed appropriately.
q.	Wetlands	☐	☒	Production area and manageable prior converted cropland are either 100 feet from wetlands or skirted with vegetation and the required setbacks are in place to protect these resources.

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AFO RESOURCE CONCERNS EVALUATION WORKSHEET

Name:	Alan Eck – **3575 Goldsboro Road**	**Agency Interest #:**	151587
Planner:	David D. Kann	**Farm # / Tract #:**	
Site Visit Date:	01/25/2024	**Total Acres:**	15
County:	Queen Anne's	**Production Area Acres:**	15 acres

	RESOURCE CONCERN	YES	NO	ASSESSMENT
a.	Biosecurity measures	☐	☒	All precautionary measures are in place and being followed. Visitor restrictions.
b.	Chemical handling	☐	☒	All chemicals are stored in an 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	☐	☒	N/A
e.	Floodplains	☐	☒	This is an existing operation and the production area is not located in the FEMA-100 year floodplain as per online mapping resources.
f.	Gully erosion	☐	☒	No gully erosion was identified in the production area or associated water conveyances.
g.	Livestock travel lanes	☐	☒	N/A
h.	Nutrient discharge	☐	☒	There are no observable nutrient discharges occurring, at the time of the site evaluation, from the production areas.
i.	Objectionable odors	☐	☒	No unusual or excessive odors were observed during the site visit.
j.	Particulate matter emissions	☐	☒	Through ventilation fans, typical levels. Grass filters in place to harbor and treat emissions.
k.	Ponding, flooding, seasonal high water table	☐	☒	No issues were identified during the site visit.
l.	Sediment	☐	☒	No obvious and observable sediment discharges are occurring from the production areas.
m.	Streambank/shoreline erosion	☐	☒	None present.
n.	Threatened/endangered species	☐	☒	No geospatial indicators have been identified on the production area.
o.	Waste storage	☐	☒	There are no resource concerns identified with the waste storage. Roofed manure shed being managed appropriately.
p.	Waterways	☐	☒	In good vigorous sod. All water conveyances are being managed appropriately.
q.	Wetlands	☐	☒	Production area and manageable prior converted cropland are either 100 feet from wetlands or skirted with vegetation and the required setbacks are in place to protect these resources.

NUTRIENT MANAGEMENT PLAN

developed by:

Agronomics Plus, LLC

March 4, 2025

2025
Queen Anne's County

prepared for:

Alan Eck
(AI # 66799)
1437 Bridgetown Road
Henderson, MD 21640

Plan Type: NMP – Roasters (larger size bird)

Plan Period: March 2025 through February 2026

FIV Risk Tier- A (avg. FIV= 227)

The following recommendations, contained in the **SUMMARY SECTION** of this plan, should be followed and adhered to based on fertilizer blend availability. Alternative crop scenarios have been listed in the Field Specific Information Section of this plan; they include nutrient recommendations at the maximum nutrient tolerances (withstanding certain exceptions) handed down by the University based on the soil test results for the prescribed crop.

Agronomics *plus*
717-792-1274
agricultural, environmental & technical consulting

Table of Contents

SECTION 1 — **Farm Plan Identification**

SECTION 2 — **Animal Information & Manure Management**

SECTION 3 — **Soils Information & Analysis of Results**

SECTION 4 — **2025 Field Specific Information w/ corresponding Farm Map(s)**

SECTION 5 — **Summary of Nutrient Recommendations** including the UM maximum nutrient recommendation allowances based on soil test results

Appendix — Record Keeping

Farm Plan Identification

PLAN IDENTIFICATION

This nutrient management plan is a single-year plan and will expire in February 2026. The plan will need revised on or before the expiration date. Any substantial changes, before this expiration date will need to be documented and revisions made by a certified consultant. A copy of this revision must be kept with your nutrient management records.

A Nutrient Management Annual Implementation Report must be submitted, each year, to the Maryland Department of Agriculture on or before March 1st.

Operator information:
Alan Eck
1437 Bridgetown Road
Henderson, MD 21640

Consultant information:
David D. Kann
PO Box 1011
East Berlin, PA 17316
(717) 792-1274
Certification #: PA-134
License Number: 2399

Date Nutrient Management Plan Developed:
March 4, 2025

Nutrient Management Plan Narrative:

This Plan was meant to cover the 2025 growing season. The farm is a grain and hay farm and raises roasters for Mountaire and hogs. Site 1, consists of 3 poultry houses. Site 2 (MAE-VUE) consists of two structures for 1200 swine and 6 poultry houses. Site 3 (Long Marsh) has 3 poultry houses.

The information in this plan addresses the issue of handling poultry litter and crust-outs along with the necessary nutrient recommendations for crops planted. The crop rotation is corn, soybeans, and hay. The poultry litter & manure, in conjunction with commercial fertilizer, is used to meet the nutrient needs of the crops.

MDE AI Number: 66799

County Location: Queen Anne's

CODE: 0047 WS CODE: 02-13-04-05 (Tuckahoe)
CODE: 0048 WS CODE: 02-13-05-08 (Southeast Creek)

Property ID	Acct ID Acres	Farm Name	Acres	County	Watershed
[redacted]	160.0 30.43	Alan Eck T966	140.9	Queen Anne's	0047
[redacted]	216.55	MAE VUE T6188	179.3	Queen Anne's/ Caroline	0047
[redacted]	75.00	Keeler T96	72	Caroline	0047

	26.41	Long Marsh	12.5 ac *(HQ only)*	Queen Anne's	0047
	241.01	Elevator Road	213.7	Queen Anne's	0047
	30.43	Stevens	11.0	Queen Anne's	0047
	22.0	Green View Hydroponics	8.8	Queen Anne's	0048

TOTAL ACRES UNDER PLAN (for nutrient application) 625.7

NUTRIENT APPLICATION SETBACKS FROM SURFACE WATER:

A minimum of a 10' vegetative setback must be in place next to surface water. The chart below indicates if surface water is present that requires a setback on any farm/operation and identifies the fields that are required to have a nutrient application setback. **An application of crop nutrients using a broadcast method either with or without incorporation requires a 35'setback. A directed spray application or the injection of crop nutrients only requires a 10'setback.** Excepting perennial forage crops grown for hay and pasture, vegetation in the 10' setback area may not include plants that would be considered part of the crop grown in the field (i.e. row crops). Pastures and hayfields are subject to a 10' and/or a 35' nutrient application setback depending on application methods. Nutrients may not be applied within the 10' setback.

Livestock on pasture are required to meet the minimum 10' setback by means of fencing unless a Best Management Practice (BMP) is approved by MDA or a Soil Conservation and Water Quality Plan is developed and implemented that prescribes an alternative to fencing animals 10' from surface water. Alternative BMP's may include stream crossings, watering facilities, pasture management, or other practices that are equally protective of water quality. Sacrifice lots for livestock require a 35' setback from surface water.

If nutrients are custom-applied, it is the operator's responsibility to inform the applicator of the setback distance based on the method of application.

Water Resources - Farm Location and Type of Setback				
Farm	**Field**	**Water Resource**	**Setback Distance (ft.)**	**Type of Nutrient Application**
Alan Eck	1,1a,2,2a,2b,3,4	Stream	Existing riparian buffer of >35'	Manure/Fertilizer
T6188	17, 18	Stream	Existing riparian buffer of >35'	Manure/Fertilizer

See more details on the Nutrient Application Setback Requirements found in the Manure Management and Field Information Sections of this Nutrient Management Plan.

The operator has the primary responsibility for plan implementation, installation of the agreed upon Best Management Practices outlined in the plan and required by the Water Quality Improvement Act (WQIA). The operator also has the responsibility of maintaining all practices associated with the nutrient management plan and all record keeping associated with the WQIA Regulations.

Animal Information & Manure Management

MANURE MANAGEMENT

Refer to the Animal Waste Quantity Worksheets for specific information.

Alan C. Eck Farm (Ferrell)

	Site 1
Animal Type	Roasters
Number of Animals (Capacity of each Structure):	House 1: 27,500 House 2: 27,500 House 3: 27,500 4.5 flocks per year
Number of Structures (Per Animal Type)	Total of 3 (each house measures 42' x 604')
Time In Location:	Year round
Manure Storage	Roofed Structure 40' x 92' 18,400 cuft (409 ton)
Litter Amount Generated/Collected	609 ton
Manure Uncollected (pasture accesses)	0

MAE-VUE

	Site 2
Animal Type	Roasters
Number of Animals (Capacity of each Structure):	House 1-4 27,000 each House 5-6 40,000 each
Number of Structures (Per Animal Type)	Total of 6 1, 2, 3, 4 (42'x604') 5, 6 Psalms (60'x604')
Time In Location:	Year round

Time In Location:	Year round
Manure Storage	Roofed Structure 40' x 108' 20,400 cuft (453 ton)
Litter Amount Generated/Collected	728 ton
Manure Uncollected (pasture accesses)	0

Other Livestock

LOCATION	450 Ell Morris Road T6188
Animal Type	Swine
Average Weight	300
Total # of Animals	1200
Total Day Equivalents Confined per year*	365
Total Day Equivalents Unconfined per year*	0
Collected Solid Manure (tons)*	2100
Uncollected Solid Manure (tons)*	0
Volume of Solid/Liquid Manure Storage (cubic	0

Long Marsh

	Site 3
Animal Type	Roasters
Number of Animals (Capacity of each Structure):	36,000 birds per house
Number of Structures (Per Animal Type)	Total of 3 House 1,2, and 3 (63' x 600')
Time In Location:	Year round
Manure Storage	Roofed Structure 50' x 98' 23,000 cuft (511 ton)
Litter Amount Generated/Collected	732 ton

Manure Storage, Usage, and Handling			
Manure Type	**Manure Used in the Farm Operation**	**Handling & Application**	**Manure Exported**
Poultry	1,464 ton annually	Manure will be used on the crop acres of the operation. Only partial house cleanouts are conducted at each site on an annual basis.	284 ton
Swine	2100 ton	Manure pack on floor under cover-all building	0 ton

Currently, a portion of the poultry manure is exported away from the farm operation acreage. That manure goes to: **Mark Eck**
450 Ell Morris Road
Henderson, MD 21640

Approximate acres receiving manure under this plan is 625 acres.

Manure application equipment should be calibrated to better gage the current output per acre. A manure analysis should be taken at the time manure is being removed from the buildings. Manure will be sampled at least twice a year until a base line of nutrients is established.

Application of nutrients should be timed as close as possible to crop growth or uptake and placed near the root zone for efficient crop use. See Field Information Section for incorporation details.

Manure stockpiles should be stored in an appropriate roofed structure or covered with an impermeable cover. If no structure is available, manure should be in a 6-foot conical pile.

When choosing a site to stockpile manure, wetlands and low lying areas should be avoided, as should any site that would allow runoff from stockpile to enter into any ditch, stream, or other surface water body.

The following is a list of conditions to be followed when hauling manure when **adverse weather conditions** arise:

- 100 feet from wells
- 35 feet from surface waters (unless injected). Injected requires a 10–foot minimum setback.

BMP RECOMMENDATION

* Concrete heavy use areas need to be added to chicken houses.

Production Area Management Guidelines – Poultry Operations
To provide environmental benefits, conservation practices must be operated and maintained as designed. The following list describes some common problems to look for in the production area of poultry operations. **It is VERY IMPORTANT that the production area (manure storage, composters, HUA pads, etc...) be kept clean and free from ANY manure that could come in contact with surface water.** Natural Resources Conservation Service (NRCS) and Soil Conservation District staff are available to provide follow-up assistance if needed.

Manure Storage Area
Manure removed from poultry houses should be stored in a covered shed until it can be applied to crops or otherwise used. The following are potential problems you may see that MUST be addressed to keep clean water on your farm, clean:

- Manure piled outside shed.
- Manure stacked too high against walls.
- Shed contains equipment or supplies that are not easily moveable (e.g., not on wheels).
- Obvious surface water conveyance near the open ends of the shed to a drainage ditch or swale.
- Structural damage to shed.
- Evidence of water or "puddling" in the storage shed.

Composters
Properly operated composters provide an environmentally sound method for disposing of normal mortality from poultry houses.
The following are potential problems you may see:

- Leakage.
- Excessive odor or flies.
- Dead birds visible.
- Evidence of animals feeding on dead birds.
- Thermometer not readily available (DE only).
- Recipe sign not posted (DE only).
- Missing or broken boards.
- Misuse and nonuse. Composter should be used for what it was intended for.

Concrete Pads
Concrete pads at the ends of poultry houses and manure sheds can reduce erosion and protect surface and ground water from contamination.
Concrete pads should be properly installed, maintained, and kept clean of manure.

The following are potential problems you may see:

- Manure present on pads.
- Obvious surface water conveyance to a drainage ditch or swale near the open ends of poultry houses and manure sheds.
- Concrete cracking or breaking off.

Proper and maintained Vegetation Around Production Area and Between Houses
It is very important to have good grass cover around the farm buildings and between the poultry houses. Well established grasses also prevent soil erosion which in severe cases could result in damage to the house pad or the footing and foundation of the poultry house. Grass also helps reduce reflected heat which in turn helps keep house temperatures under control in hot weather. Grass should always be kept mowed and weeds should also be kept under control. Not only are un-mowed weeds and grass unsightly, but they can encourage rodents and can also reduce the effectiveness of natural ventilation. Tall weeds and grass provide rats and mice a place to hide that is close to the building. Most rodent control programs will stress

the need to keep areas around buildings mowed frequently.

Standing puddles of water encourage mosquitoes and kill vegetation, so low spots should be filled to prevent such problems. Also, drainage ditches, drainage ways, and swales should be properly mowed and maintained to give storm water an easy exit. Any trash and debris should be removed from ditches and grass and weeds kept short to encourage water flow.

Windbreak/Shelterbelt

Windbreaks, or vegetative environmental buffers, are planted around poultry houses to provide shelter from winter winds; reduce particulates, ammonia, and other odors from tunnel fans; create visual screens; and provide shade to reduce extreme summer heat.

The following are potential problems you may see:

- Trees dead, dying, or damaged (e.g., broken off, mowed over, bagworms, etc.).
- Lack of weed control around trees or insect control.
- Irrigation system not functioning (e.g., major leaks, broken lines, etc.).
- No irrigation system (newly established trees should be irrigated for the first 2-3 years).

Other Concerns

Other issues that may result in environmental concerns include, but are not limited to:

- Manure scattered around the production area on roads, along the edge of concrete pads or building foundations.
- Manure runoff visible.
- Roof runoff that is creating erosion or drainage problems.
- Lack of good vegetative cover for filtering storm runoff between waste storage structures, composters, or ends of the poultry houses, and drainage outlets.
- Overall farm appearance (a farm that "looks good" is less likely to generate complaints from neighbors).
- **Potholes in travelways or standing water in swales, near exhaust fans.**
- Maintenance of stormwater management.

AET Consulting Inc

AET CONSULTING INC
2677 TELEGRAPH RD
NORTH EAST, MD 21901-1207

Prepared For
ALAN ECK

Sample Information			
Lab Number	FF49485	Sampled	04-08-2024
Sample	ROASTER	Tested	04-12-2024
Manure Type	Poultry, Solid with litter		

Certificate of Analysis
Manure

Analysis	Result	Unit	*Nutrients lbs/Ton*	*Available 1st Yr* [3] *lbs/Ton*		
Moisture	28.43	%				
Nitrogen, Total	3.57	%	71.4	47.3 [4]		
Nitrogen, Ammonium	.56	%	11.2	11.2 [4]		
Nitrogen, Organic	3.01	%	60.2	36.1 [4]		
Phosphorus [P2O5], Total	3.84	%	76.8	76.8 [4]		
Potassium [K2O]	3.51	%	70.2	70.2 [4]		

(1) Estimates of 1st year nutrient availability are unavailable if manure type is not specified.
(2) Estimates of 1st year nutrient availability of "Total Nitrogen" are unavailable if no "Ammonium Nitrogen" test is run.
(3) Estimates of 1st year nutrient availability do not take into consideration losses in handling and storage prior to incorporation. Nutrient Management Plan guidelines use 100% availability the 1st year for phosphorus and potassium. Actual 1st year availability varies from 40-90% depending on manure type, soil temperature, moisture and other factors. When using manure credits in fertility programs other than NMP, consult state publications, MWP-18, "Livestock Waste Facilities Handbook" or Spectrum Analytic for more specific 1st year availability percentages.
(4) Source: MWP-18, "Livestock Waste Facilities Handbook"
(5) Source: A3411, "Manure Nutrient Credit Worksheet", University of Wisconsin

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1087 Jamison Road NW
Washington Court House, OH 43160-8748
www.spectrumanalytic.com

AGRONOMICS PLUS
BOX 1011
EAST BERLIN, PA 17316

Prepared For
ALAN ECK
LONG MARSH - GOLDSBORO
HENDERSON, MD 21640

Sample Information			
Lab Number	FF65584	Sampled	03-05-2024
Sample	ROASTER	Tested	03-14-2024
Manure Type	Poultry, Solid with litter		

Certificate of Analysis
Manure

Analysis	Result	Unit	*Nutrients lbs/Ton*	*Available 1st Yr*[3] *lbs/Ton*		
Moisture	26.32	%				
Nitrogen, Total	2.77	%	55.4	35.9[4]		
Nitrogen, Ammonium	.33	%	6.6	6.6[4]		
Nitrogen, Organic	2.44	%	48.8	29.3[4]		
Phosphorus [P2O5], Total	2.16	%	43.2	43.2[4]		
Potassium [K2O]	2.61	%	52.2	52.2[4]		

(1) Estimates of 1st year nutrient availability are unavailable if manure type is not specified.
(2) Estimates of 1st year nutrient availability of "Total Nitrogen" are unavailable if no "Ammonium Nitrogen" test is run.
(3) Estimates of 1st year nutrient availability do not take into consideration losses in handling and storage prior to incorporation. Nutrient Management Plan guidelines use 100% availability the 1st year for phosphorus and potassium. Actual 1st year availability varies from 40-90% depending on manure type, soil temperature, moisture and other factors. When using manure credits in fertility programs other than NMP, consult state publications, MWP-18, "Livestock Waste Facilities Handbook" or Spectrum Analytic for more specific 1st year availability percentages.
(4) Source: MWP-18, "Livestock Waste Facilities Handbook"
(5) Source: A3411, "Manure Nutrient Credit Worksheet", University of Wisconsin

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AGRONOMICS PLUS
BOX 1011
EAST BERLIN, PA 17316

Prepared For
ALAN ECK 1437 BRIDGETOWN ROAD HENDERSON, MD 21640

Sample Information			
Lab Number	FF65583	Sampled	03-05-2024
Sample	HOGS - PACK	Tested	03-14-2024
Manure Type	Poultry, Solid with litter		

Certificate of Analysis
Manure

Analysis	Result	Unit	*Nutrients lbs/Ton*	*Available 1st Yr [3] lbs/Ton*		
Moisture	82.61	%				
Nitrogen, Total	1.22	%	24.4	17.8 [4]		
Nitrogen, Ammonium	.4	%	8.0	8.0 [4]		
Nitrogen, Organic	.82	%	16.4	9.8 [4]		
Phosphorus [P2O5], Total	.93	%	18.6	18.6 [4]		
Potassium [K2O]	1.04	%	20.8	20.8 [4]		

(1) Estimates of 1st year nutrient availability are unavailable if manure type is not specified.
(2) Estimates of 1st year nutrient availability of "Total Nitrogen" are unavailable if no "Ammonium Nitrogen" test is run.
(3) Estimates of 1st year nutrient availability do not take into consideration losses in handling and storage prior to incorporation. Nutrient Management Plan guidelines use 100% availability the 1st year for phosphorus and potassium. Actual 1st year availability varies from 40-90% depending on manure type, soil temperature, moisture and other factors. When using manure credits in fertility programs other than NMP, consult state publications, MWP-18, "Livestock Waste Facilities Handbook" or Spectrum Analytic for more specific 1st year availability percentages.
(4) Source: MWP-18, "Livestock Waste Facilities Handbook"
(5) Source: A3411, "Manure Nutrient Credit Worksheet", University of Wisconsin

Spectrum Analytic
1087 Jamison Road NW
Washington Court House, OH 43160-8748
www.spectrumanalytic.com

AGRONOMICS PLUS
BOX 1011
EAST BERLIN, PA 17316

Prepared For
ALAN ECK 1437 BRIDGETOWN ROAD HENDERSON, MD 21640

Sample Information			
Lab Number	FF65582	Sampled	03-05-2024
Sample	ROASTER	Tested	03-14-2024
Manure Type	Poultry, Solid with litter		

Certificate of Analysis
Manure

Analysis	Result	Unit	*Nutrients lbs/Ton*	*Available 1st Yr* [3] *lbs/Ton*
Moisture	34.92	%		
Nitrogen, Total	3.09	%	61.8	40 [4]
Nitrogen, Ammonium	.37	%	7.4	7.4 [4]
Nitrogen, Organic	2.72	%	54.4	32.6 [4]
Phosphorus [P2O5], Total	2.94	%	58.8	58.8 [4]
Potassium [K2O]	3.59	%	71.8	71.8 [4]

(1) Estimates of 1st year nutrient availability are unavailable if manure type is not specified.
(2) Estimates of 1st year nutrient availability of "Total Nitrogen" are unavailable if no "Ammonium Nitrogen" test is run.
(3) Estimates of 1st year nutrient availability do not take into consideration losses in handling and storage prior to incorporation. Nutrient Management Plan guidelines use 100% availability the 1st year for phosphorus and potassium. Actual 1st year availability varies from 40-90% depending on manure type, soil temperature, moisture and other factors. When using manure credits in fertility programs other than NMP, consult state publications, MWP-18, "Livestock Waste Facilities Handbook" or Spectrum Analytic for more specific 1st year availability percentages.
(4) Source: MWP-18, "Livestock Waste Facilities Handbook"
(5) Source: A3411, "Manure Nutrient Credit Worksheet", University of Wisconsin

Soil Test

The nutrient status of the soil is one of the most important components of a nutrient management plan. A soil test is a laboratory procedure that measures the plant-available portion of soil nutrients. This measurement is used to predict the amount of nutrient or nutrients that will be available during the growing season. Soil test results form the basis for nutrient recommendations. Traditional soil tests include tests for pH, phosphorus, potassium, nitrogen, soil organic matter, and electrical conductivity. You should sample each field area where animal waste nutrients are to be applied. If different field areas have different soil types, past cropping histories, or different production potentials, you should sample and manage these areas separately. You can use soil test results to characterize soil conditions and to determine the agronomic nutrient application rate for animal waste application.

Description

Soil sampling determines the average nutrient concentration in a field, and allows you to measure nutrient variability in the field. When you know the variability, you can adjust the fertilizer application rates to more closely meet the supplemental nutrient needs of a crop, which can increase crop yield, reduce commercial fertilizer costs, and reduce environmental risk.

Send all samples to an accredited laboratory for analyses. An accredited laboratory is one that has been accepted in one or more of the following programs:

- State-certified programs;
- The North American Proficiency Testing Program (Soil Science Society of America); and
- Laboratories participating in other programs whose tests are accepted by the Land Grant University in the state in which the tests are used as the basis for nutrient application.

The analytical results from a soil test extraction are relatively meaningless by themselves. You and/or your Certified Nutrient Management Specialist must interpret soil nutrient levels in terms of the soil's ability to supply the nutrients to crops. Most soil test laboratories use qualitative terms such as "low," "medium or optimum," and "high or very high," which are related to quantities of nutrients extracted, to label the results.

Soil testing is a chemical evaluation of the nutrient-supplying capability of a soil at the time of sampling. Poor soil-sampling procedures account for more than 90% of all errors in fertilizer recommendations based on soil tests. The test is only as good as the sample, so you must handle the sample properly for it to remain a good sample. A testing program can be divided into four steps: 1) taking the sample, 2) analyzing the sample, 3) interpreting the sample analyses, and 4) making the fertilizer recommendations.

Take samples as close as possible to planting or to the time of crop need for the nutrient, approximately two to four weeks before planting or fertilizing the crop. It usually takes one to three weeks from the time you sample for you to receive the results. Very wet, very dry, or frozen soils will not affect results, but obtaining samples during these climatic conditions is very difficult. Do not sample snow-covered fields because the snow makes it difficult to recognize. Avoid unusual areas in the field because your sample may not be representative.

You may need to sample once every year and fertilize for the potential yield of the intended crop, especially for mobile nutrients. Whether you need an analysis of a nutrient depends on such things as mobility in the soil and the nutrient requirements of the crop.

ANALYSIS OF SOIL TEST RESULTS

Soil tests were taken by Growmark and the farm operator. The laboratory used to analyze the samples was Waypoint. A copy of the test results are enclosed.

The soil testing revealed **4** crop fields with **Phosphorus levels above a FIV 150**.

FIELDS w/ Phosphorus FIV Levels ≥150					
FARM	FIELD	ACRES	FIV LEVEL	PMT RESULT	P Based Plan
Alan Eck 966	1	45	177	64	Med
	2	64.5	252	85	Med
	5	8	176	70	Med

Low: 0-50 PMT result- total phosphorus applications should be limited to no more than a three-year crop P removal rate applied over a three year period

Med: 51-100 PMT result- Phosphorus applications should be limited to the amount of P expected to be removed from the field by the crop harvest immediately following P application or soil-test based P application recommendations.

High: > 100 PMT result- No phosphorus can be applied to this site

FIV Risk Tier- A (avg. FIV= 227)

Year	Crop	Phosphorus Application Fertilizer/Starter/Manure	Crop P Removal (based on crop yield goal in NMP)
2025	Hay (4 ton)	1 ton of Litter = 66 lbs.	60 lbs.
2025	Corn (210 bu.)	1 ton of Litter = 66 lbs.	84 lbs.
2025	Corn + Wheat	2 ton of Litter = 132 lbs.	129 lbs.

The Phosphorus Management Tool

The Objective of the University of Maryland Phosphorus Management Tool was to develop a phosphorus site index (PSI) that uses readily available information to evaluate the relative risk of P transport from agricultural fields, including vegetable and row crop production and pasture based systems where P may be applied either as inorganic or organic fertilizer. Furthermore, the PSI should be applicable within all physiographic provinces present in Maryland. Phosphorus transport is controlled by site characteristics (e.g. hydrology and slope), climate, and P sources (e.g. manure, inorganic fertilizer, and soil P). The revised PSI, or the University of Maryland – Phosphorus Management Tool (UM-PMT), seeks to include new science relative to site and source factors and highlight management decisions so that the learning opportunities associated with performing a P index are more pronounced. The overall objective is to identify critical areas where there is a high P loss potential due to both a high transport potential and a large source of P, and also to encourage the use of management practices in those critical source areas that protect water quality.

2025 Field Specific Information
w/ corresponding Farm Map(s)

Buffer pH	Farm Id	Results Uni	Phosphorus	Potassium	Calcium	Magnesium	Sulfur	Sodium	Zinc	Manganese	Iron
6.86	81 Bolt	ppm	127	182	669	103	14	21	8.2	19	160
6.88	81 Bolt	ppm	145	214	723	146	15	24	8.5	15	113
6.81	96 Keeler 1, 2	ppm	133	157	868	180	12	18	6	5	202
6.82	96 Keeler 3 4 5	ppm	148	132	876	133	14	17	8.2	7	197
6.84	6846 Elevator Rd.	ppm	79	120	621	115	17	16	4.8	16	144
6.88	6846 Elevator Rd.	ppm	98	219	687	137	19	24	5.6	21	118
6.85	6846 Elevator Rd.	ppm	51	142	587	124	14	15	3.8	26	122
6.84	6846 Elevator Rd.	ppm	107	233	776	152	21	25	6.2	25	118
6.89	95 Halloway	ppm	124	150	628	97	11	14	6.6	11	114
6.85	95 Halloway	ppm	163	169	711	98	13	16	7.8	10	123
6.91	95 Halloway	ppm	155	169	1020	149	14	16	8.8	13	106
6.86	1863 Dad S	ppm	210	150	779	117	13	22	9	24	127
6.85	1863 Dad S	ppm	153	166	672	108	14	21	8.9	27	119
6.87	1863 Dad S	ppm	111	174	662	104	15	18	9.6	42	102
6.86	1863 Dad S	ppm	119	189	649	99	16	19	7.6	34	102
6.86	1861 Sunnyside	ppm	87	165	711	120	10	13	7.1	23	117
6.89	1861 Sunnyside	ppm	76	118	803	139	14	22	4.9	9	207
6.86	1117 Mae-Vue 1	ppm	147	269	794	128	14	20	9.2	14	213
6.69	1117 Mae-Vue 2	ppm	177	316	2013	287	16	16	9.8	6	268
6.88	1117 Mae-Vue 3	ppm	151	120	759	104	12	12	7.9	8	143
6.81	1117 Mae-Vue 5	ppm	227	181	879	127	12	16	12.9	10	347
6.84	1117 Mae-Vue 6	ppm	172	171	980	141	12	12	9.1	10	201
6.86	1117 Mae-Vue 8	ppm	123	145	777	123	14	12	6.1	9	163
6.85	1117 Mae-Vue 9	ppm	265	183	1284	197	15	21	10.8	9	306
6.83	1117 Mae-Vue Hay	ppm	123	59	1106	188	11	23	6	6	357
6.83	29 Feathered Acres	ppm	86	117	919	121	18	20	6.7	15	361
6.89	844 Weaver	ppm	47	180	723	124	12	18	4.3	17	93
6.77	1459 Warren	ppm	212	220	955	154	15	25	6.6	7	183
6.87	1862 Wilson	ppm	69	180	932	140	12	15	7.5	35	113
6.88	302 green house	ppm	54	109	890	117	11	15	3.5	14	187
6.86	2324 Willamson	ppm	112	158	740	114	13	14	8.3	13	196
6.9	Long Marsh	ppm	128	180	1006	74	10	15	4.5	8	172

3/3/25

Customer N	Grower Id	Grower Nar	Grower Line	Farm Id	Field Id	Sample Id	Report Nun	Current Dat	Lab Numbe	anic Matter	Cation Exch	pH
25006		Alan Eck		81 Bolt		1 2	25-059-08E	20250303	14968	1.9	5.5	6.2
25006		Alan Eck		81 Bolt		3 4 5	25-059-08E	20250303	14969	2.2	6	6.4
25006		Alan Eck		96 Keeler		1	25-059-08E	20250303	14970	2.8	7.5	6
25006		Alan Eck		96 Keeler		2	25-059-08E	20250303	14971	2.4	7	6
25006		Alan Eck		6846 Elevator Rd.		2	25-059-08E	20250303	14972	1.8	5.3	5.9
25006		Alan Eck		6846 Elevator Rd.		21	25-059-08E	20250303	14976	2	5.7	6.4
25006		Alan Eck		6846 Elevator Rd.		4	25-059-08E	20250303	14974	1.8	5.2	6
25006		Alan Eck		6846 Elevator Rd.		5	25-059-08E	20250303	14975	2.1	6.8	6.1
25006		Alan Eck		95 Halloway		1	25-059-08E	20250303	14977	1.6	4.8	6.5
25006		Alan Eck		95 Halloway		2	25-059-08E	20250303	14978	2.1	5.7	6.1
25006		Alan Eck		95 Halloway		3 4 5	25-059-08E	20250303	14979	2.1	7	6.8
25006		Alan Eck		1863 Dad S		2	25-059-08(	20250303	14980	1.5	6.1	6.2
25006		Alan Eck		1863 Dad S		3	25-059-08(	20250303	14981	1.6	5.6	6.1
25006		Alan Eck		1863 Dad S		4	25-059-08(	20250303	14982	1.6	5.3	6.3
25006		Alan Eck		1863 Dad S		5	25-059-08(	20250303	14983	2	5.3	6.1
25006		Alan Eck		1861 Sunnyside		3	25-059-08(	20250303	14985	1.9	5.7	6.2
25006		Alan Eck		1861 Sunnyside		5	25-059-08(	20250303	14986	1.5	6	6.5
25006		Alan Eck		1117 Mae-Vue		1	25-059-08(	20250303	14987	1.9	6.5	6.3
25006		Alan Eck		1117 Mae-Vue		2	25-059-08(	20250303	14988	5.8	15.7	6
25006		Alan Eck		1117 Mae-Vue		3	25-059-08(	20250303	14989	1.6	5.5	6.4
25006		Alan Eck		1117 Mae-Vue		5	25-059-08(	20250303	14990	2.4	7.2	5.9
25006		Alan Eck		1117 Mae-Vue		6	25-059-08(	20250303	14991	2.3	7.5	6.2
25006		Alan Eck		1117 Mae-Vue		8	25-059-08(	20250303	14992	1.9	6	6.2
25006		Alan Eck		1117 Mae-Vue		9	25-059-08(	20250303	14993	2.7	9.4	6.4
25006		Alan Eck		1117 Mae-Vue		Hay	25-059-08(	20250303	14994	2.7	8.3	6.2
25006		Alan Eck		29 Feathered Acres		1	25-059-08(	20250303	14996	2.1	7	6.1
25006		Alan Eck		844 Weaver		2	25-059-08(	20250303	14997	1.5	5.6	6.5
25006		Alan Eck		1459 Warren		1	25-059-08(	20250303	14998	2.8	8.3	5.8
25006		Alan Eck		1862 Wilson		1	25-059-08(	20250303	14999	2.1	7	6.4
25006		Alan Eck		302 green house		3	25-059-08(	20250303	15000	1.8	6.3	6.5
25006		Alan Eck		2324 Willamson		3 + 4	25-059-08(	20250303	15001	1.7	5.8	6.2
25006		Alan Eck		Long Marsh		Long Marsh	25-059-08(	20250303	15002	1.7	6.5	6.7

Report Number: 22-349-0518
Account Number: 25006

GROWMARK FS, Inc.
PHONE: (302) 422-3001 • P.O. BOX 308 • N.E. FRONT ST. • MILFORD, DELAWARE
PHONE: (302) 875-7511 • 431 N. POPLAR ST. • MILFORD, DELAWARE

Send To: Growmark FS
1002 Hope Road
Centreville MD 21617

Grower: Alan Eck
Greenhouse

SOIL ANALYSIS REPORT

Analytical Method(s): Mehlich 3 SMP Buffer pH Loss On Ignition Water pH

Date Received: 12/15/2022 **Date Of Analysis:** 12/16/2022 **Date Of Report:** 12/16/2022

Sample ID / Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
3	16049	2.3 L		85	91 H MD = 101			135 H MD = 86	163 H MD = 126	1182 H MD = 122	17 VL	6.8		0.2	7.9

Sample ID / Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts		
	K %	Mg %	Ca %	Na %	H %	NO_3 N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate		
3	4.4	17.2	74.8	0.9	2.5		13 L	4.8 H	19 M	270 VH	2.2 H	0.5 L			

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by:

BrandiWatson

Date Received: 12/15/2022
Date Of Report: 12/16/2022

SOIL FERTILITY RECOMMENDATIONS

Sample ID / Field ID	Intended Crop	Yield Goal bu	Lime Tons/A	Nitrogen N lb/A	Phosphate P_2O_5 lb/A	Potash K_2O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
3	Soybeans	70	0.0	15	30	104	0	43	1.6	2	0	0	
3	Barley	100	0.0	113	30	34	0	22	1.6	2	0	0	

Comments:

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

Brandi Watson

FIELD OR MANAGEMENT UNIT SPECIFIC INFORMATION

A soil conservation plan should be implemented as time and resources allow. The conservation plan helps to minimize soil erosion which translates into reducing the amount of phosphorus lost with movement of soil and/or sediment.

All crop yield determinations were based on the records and information provided by the operator.

Nutrients - On Farm Sources (available for crop production):

Nutrient Source	Amount Available	Rate of Application	Nutrients Supplied $N - P_2O_5 - K_2O$ (lbs/acre)
Roaster (T966) Growout/Crustouts	1200 t	1 ton/ac	37-66-82
Roaster (T966) Growout/Crustouts	---	3 ton/ac	115-230-211
Hog	2100 t	7 ton/ac	92-171-175

Split applications of nitrogen on environmentally sensitive sites reduce potential for runoff and leaching. Utilization of a Pre-Sidedress Nitrogen Test (PSNT) or tissue test can help determine additional N requirements during the growing season.

Application of nutrients should be timed as close as possible to crop growth or uptake and placed near the root zone for efficient crop use.

Special Provisions and Considerations:

The following special provisions allow farmers to apply phosphorus to crops when it would otherwise be restricted by the PMT. For additional guidance, farmers should contact their Nutrient Management Consultant.

- **Tissue Analysis**
- **MDA Approved Research Trials**

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 establishing the effectiveness of these practices.
8. Sacrifice lots (less than 75% grass or grass legume mix) shall maintain a 35-foot setback.

PSNTs are excellent for evaluating nitrogen application on corn later in the season. The results of these tests can confirm the need for additional nitrogen at sidedress time.

FSNTs (Fall Soil Nitrate Test)

Recent research has demonstrated that winter wheat and barley grain yields and economic return to fertilizer application are not reliably improved by fall nitrogen application when an adequate amount of nitrate already exists in the soil.

Regulations effective October 2012 require that farmers who plant wheat and barley for grain production must test for soil nitrate concentration before they may apply nitrogen in the fall.

The Fall Soil Nitrate Test (FSNT) is a test that measures the concentration of nitrate in the soil as an indicator of whether a fall nitrogen application is needed at the time of planting wheat and barley.

Wheat: if FSNT is greater than or equal to 10 ppm, no fall N application is recommended

Barley: if FSNT is greater than or equal to 15 ppm, no fall N application is recommended

Fall Application: (September 10 thru December 15th)

When applying or recommending nutrients in the fall, the consultant and operator, or the certified farm operator, shall use the following management guidelines. The guidelines address chemical fertilizer and natural organic fertilizer use separately.

Chemical Fertilizer Use:

1. Chemical fertilizer may be recommended and applied as a starter fertilizer, provided rates and subsequent applications are made in accordance with recommendations for small grains and fall seeded crops.

2. The application of liming materials without nitrogen may be recommended in the fall or winter.

Manure Use:

1. Manure may be applied as a starter fertilizer if the rates and timing follow the recommendations for fall seeded crops found in Section I-B of the Maryland Nutrient Management Manual. (Example: For small grains, this is a maximum of 30 pounds of available nitrogen/acre)
2. Manure application above the fall recommended rate for fall seeded crops (greater than 30 pounds/acre of nitrogen) is allowed at fall planting (up to the University of Maryland's recommended rate of the fall crops" phosphorus removal requirements) only if storage is inadequate, and it is necessary to avoid application during the winter.
3. To avoid application during the winter, when storage is inadequate and manure

is not stackable (greater than 60% moisture, such as dairy slurry), manure application may be made during the fall at levels up to the next year's warm season crops' phosphorus removal requirements. Applications shall either be made into existing vegetative cover, or a cool season grass or cereal grain shall be planted as a cover crop.

Winter Application: (December 16 thru February 28th)

Manure may be applied in the winter only if the farm operation has inadequate storage, a non-stackable manure, and no other reasonable option to manage it. Application shall be made in accordance with MDA's restrictions.

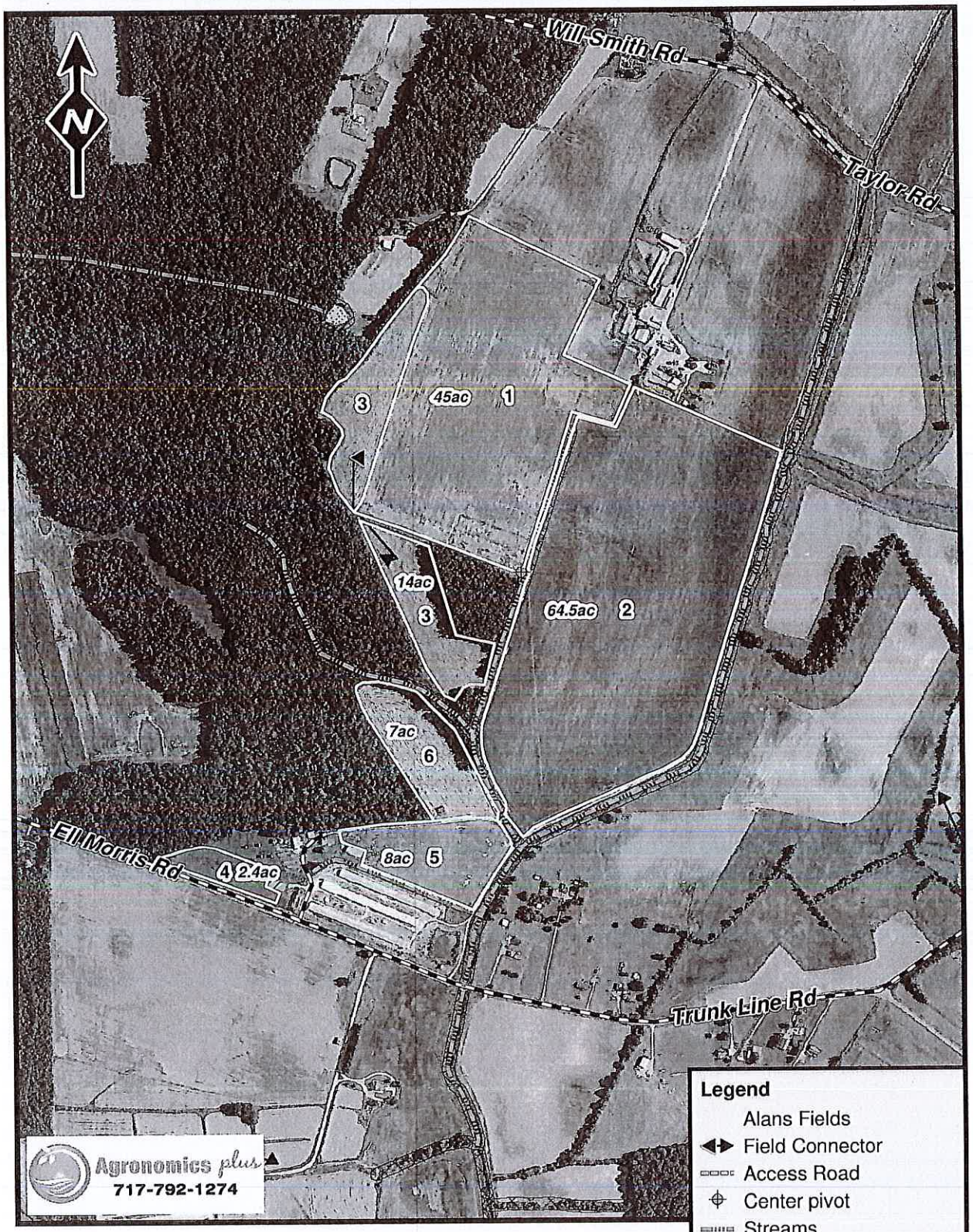
Nutrient Applicators Vouchers are required by the State of Maryland for anyone who applies nutrients of any type to 10 acres or more. This includes manure and commercial fertilizer such as starter used in the planter. If certification has not already been obtained please note it is required.

PSNTs are excellent for evaluating nitrogen application on corn later in the season. The results of these tests can confirm the need for additional nitrogen at sidedress time.

Nutrient Applicators Vouchers are required by the State of Maryland for anyone who applies nutrients of any type to 10 acres or more. This includes manure and commercial fertilizer such as starter used in the planter. If certification has not already been obtained please note it is required.

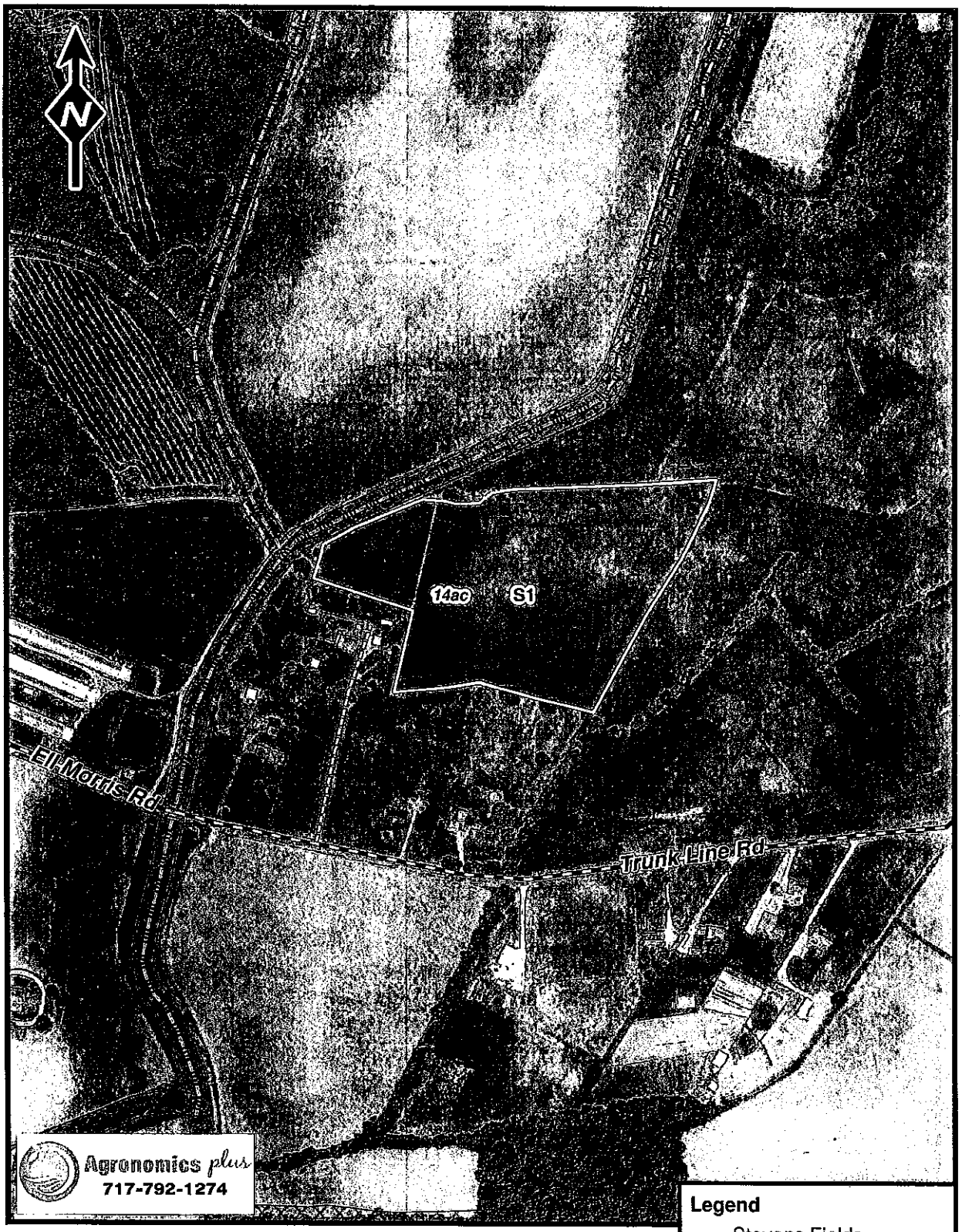
Alan Eck

Alans 966 (Dennys)



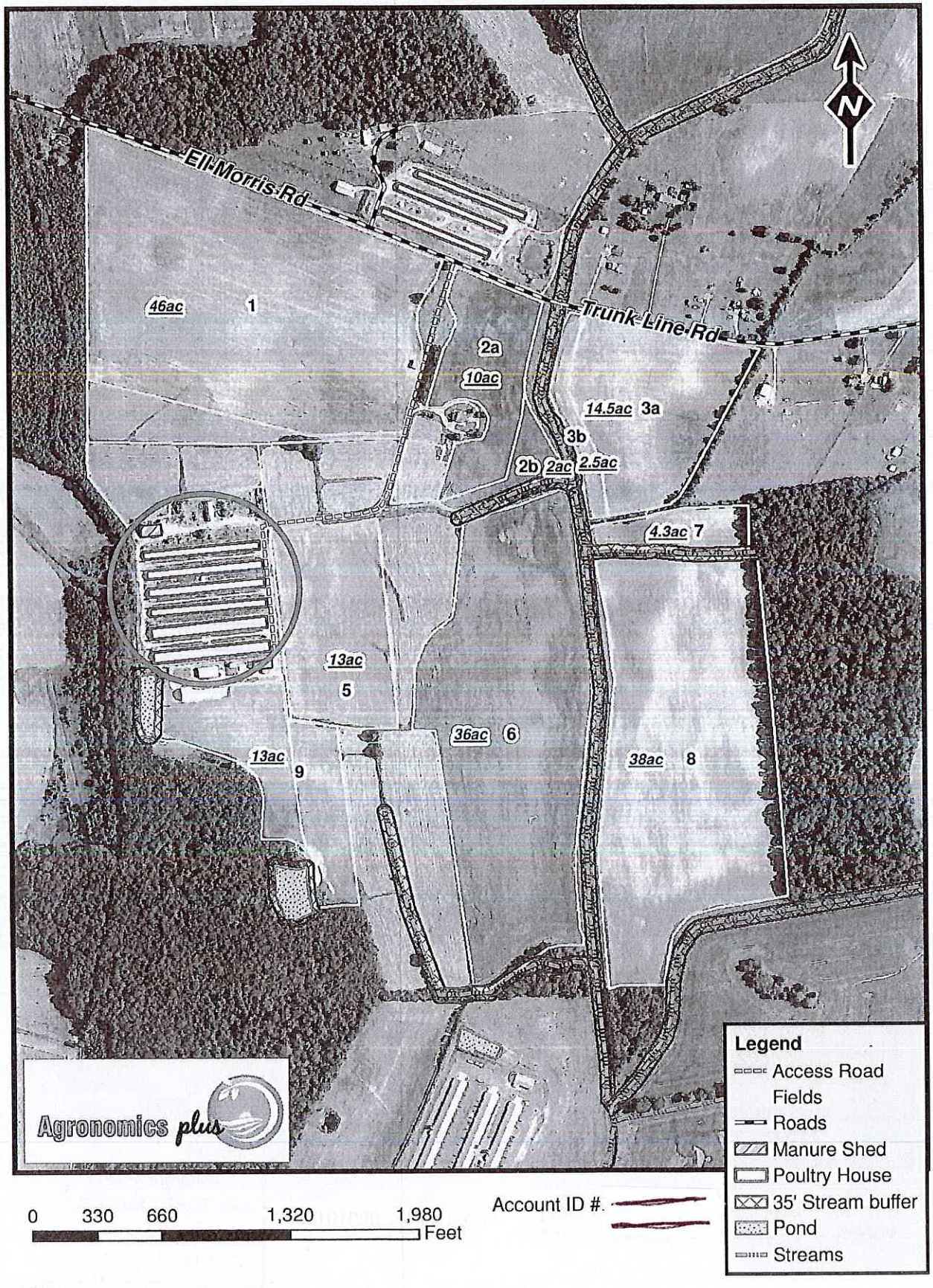
Alan Eck

Stevens Property



Alan Eck

MAE VUE Farm

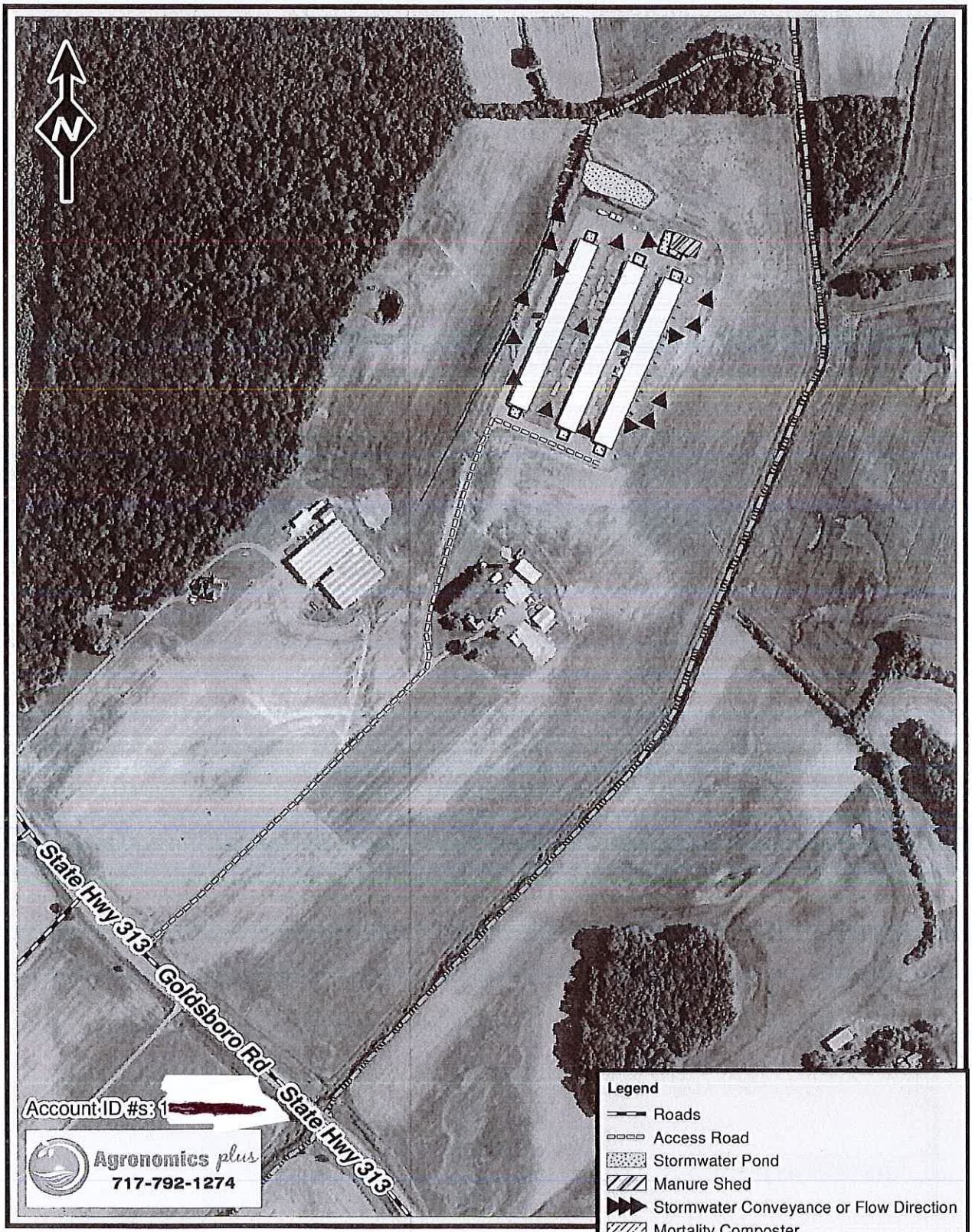


Alan Eck

MAE VUE Farm

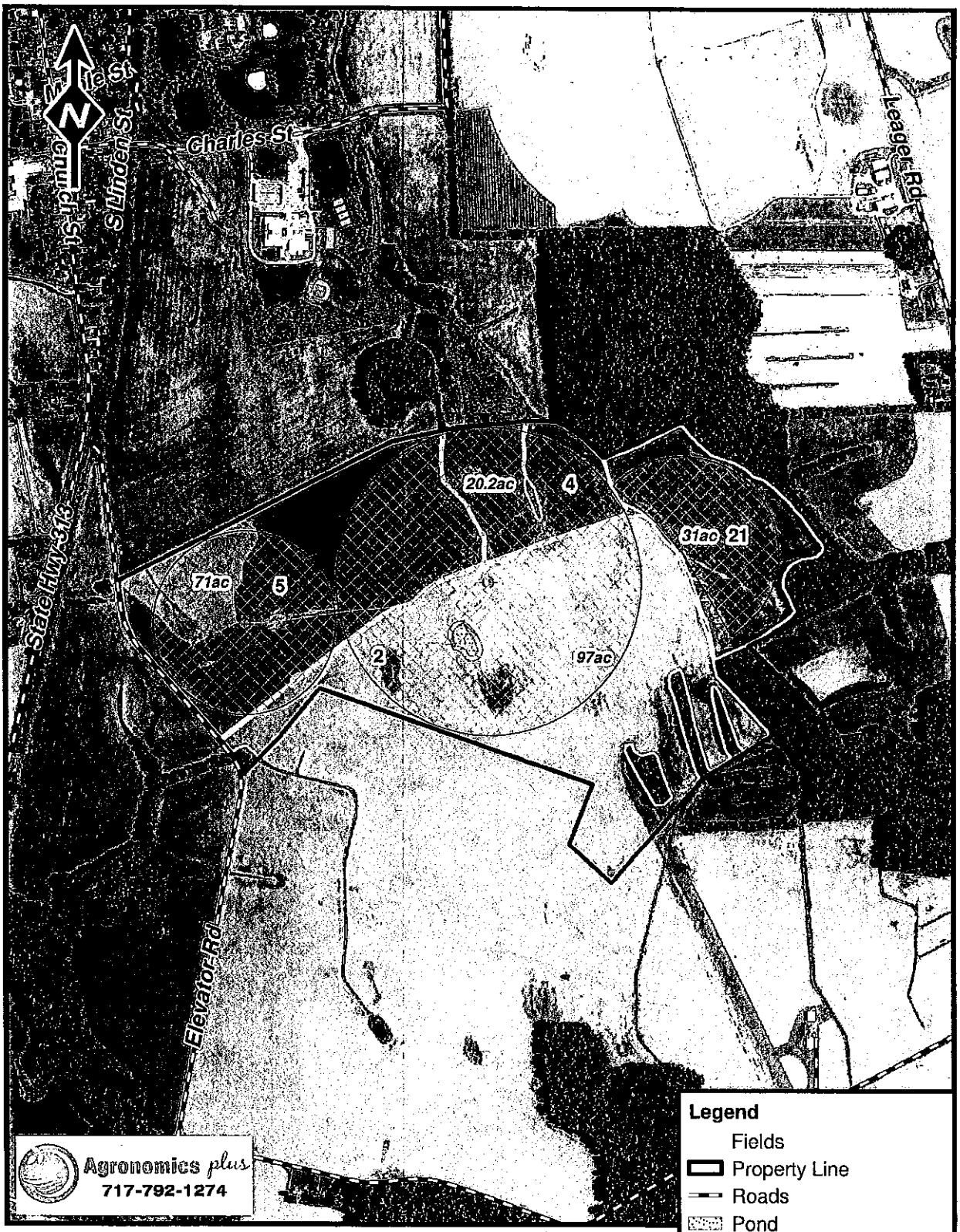
Alan Eck

Long Marsh Farm - Stormwater Conveyance Map



Alan Eck

Elevator Road Farm - T6846

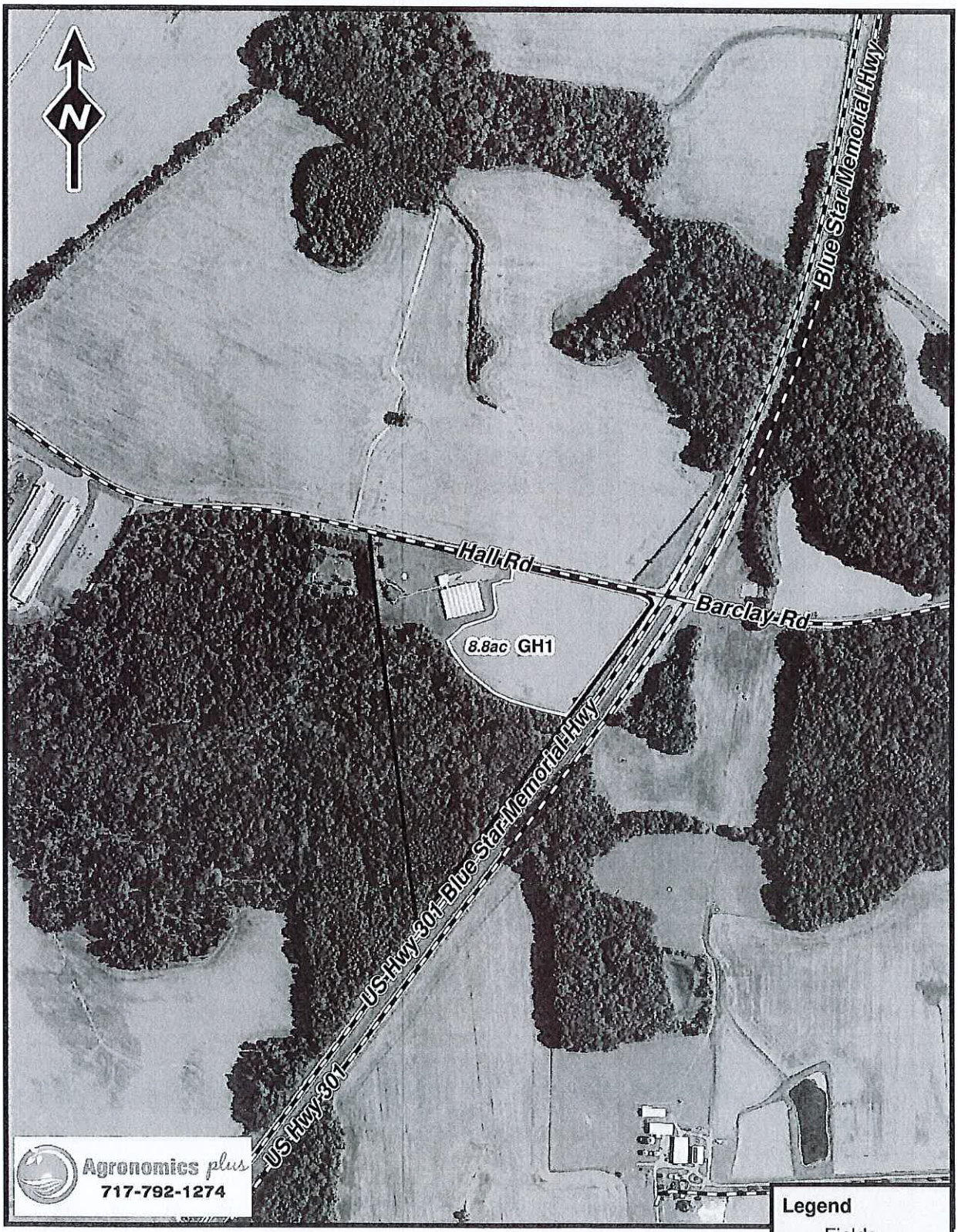


Alan Eck

Keeler Farm

Alan Eck

Green View Hydroponics on Hall Road



Account ID #: [redacted]

Field Information Sheet

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Area	Crops	Yield Goal	Tillage Method	Past Legume N Credit	Nutrient Source Manure/Sludge Field History			
							Last Year		2 Years Ago	
							Type	Rate	Type	Rate
Alan Eck 966	1	45.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0			Pltr, Int +L	1.0 tons/A
Alan Eck 966	2	64.50 Acres	Corn grain, conservation till	240	Cons tillage, res 30-70%	15	Pltr, Int +L	2.0 tons/A		
Alan Eck 966	3	14.00 Acres	Orchardgrss; Maint.	4.0	Cons tillage, res 30-70%	0				
Alan Eck 966	4	2.40 Acres	Orchardgrss; Maint.	4.0	No-till, res > 70%	0				
Alan Eck 966	5 behind barn	8.00 Acres	Barley/Double Crop Soybeans	100 - 40	No-till, res > 70%	0				
Alan Eck 966	6	7.00 Acres	Orchardgrss; Maint.	4.0	Cons tillage, res 30-70%	0				
Stevens	S1	14.00 Acres	Soybeans	60	Cons tillage, res 30-70%	0				
MAE VUE	1	46.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0				
MAE VUE	2A	10.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	15				
MAE VUE	2B	2.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	15				
MAE VUE	3A	14.50 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0				
MAE VUE	3B	2.50 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0				
MAE VUE	5	13.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	15				
MAE VUE	6	36.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	15				

Field Information Sheet

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Area	Crops	Yield Goal	Tillage Method	Past Legume N Credit	Nutrient Source Manure/Sludge Field History			
							Last Year		2 Years Ago	
							Type	Rate	Type	Rate
MAE VUE	7	4.30 Acres	Corn grain, conservation till	200	Cons tillage, res 30-70%	0				
MAE VUE	8	38.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0				
MAE VUE	9	13.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	15				
MAE VUE	17	2.00 Acres	Orchardgrss; Maint.	3.0	No-till, res > 70%	0				
MAE VUE	18	11.50 Acres	Orchardgrss; Maint.	4.0	No-till, res > 70%	0				
MAE VUE	19	5.40 Acres	Orchardgrss; Maint.	4.0	No-till, res > 70%	0				
MAE VUE	20	6.00 Acres	Orchardgrss; Maint.	4.0	No-till, res > 70%	0				
MAE VUE	21	6.00 Acres	Orchardgrss; Maint.	4.0	No-till, res > 70%	0				
MAE VUE	22	7.80 Acres	Orchardgrss; Maint.	4.0	No-till, res > 70%	0				

Field Information Sheet

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	4-10-2025

Tract No. / Farm Name	Field No.	Area	Crops	Yield Goal	Tillage Method	Past Legume N Credit	Nutrient Source Manure/Sludge Field History			
							Last Year		2 Years Ago	
							Type	Rate	Type	Rate
Elevator Rd Farm	2	97.00 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0				
Elevator Rd Farm	21 back	31.00 Acres	Wheat/Double Crop Soybeans	80 - 40	Cons tillage, res 30-70%	0				
Elevator Rd Farm	4 middle	20.20 Acres	Corn grain, conservation till	210	Cons tillage, res 30-70%	0				
Elevator Rd Farm	5 left	71.00 Acres	Wheat/Double Crop Soybeans	80 - 40	Cons tillage, res 30-70%	0				
Green View	GH1	8.80 Acres	Corn grain, conservation till	190	Cons tillage, res 30-70%	0				
Keeler	1	17.00 Acres	Soybeans	60	Cons tillage, res 30-70%	0				
Keeler	2	5.50 Acres	Soybeans	60	Cons tillage, res 30-70%	0				
Keeler	3, 4, 5	8.00 Acres	Soybeans	60	Cons tillage, res 30-70%	0				

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Alan Eck 966	1 2025 [M]	2 Corn grain, conservation till 28 1 2 3 27 60 92 93	45.00 Acres	210 Bu/A	210-0-0 #/A	0 #/A	5 #/A	0 #/A	Total	205 #/A	0 #/A	0 #/A		0.0 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	175 #/A	0 #/A	0 #/A		
Alan Eck 966	2 2025	25 Wheat 7 28 3 4 41 44 142	64.50 Acres	80 Bu/A	80-0-45 #/A	0 #/A	0 #/A	0 #/A	Total	80 #/A	0 #/A	45 #/A		0.7 t/A
									tpdrs@ green-up	40 #/A	0 #/A	45 #/A		
									tpdrs @ Feekes 5-6	40 #/A	0 #/A	0 #/A		
Alan Eck 966	2 2025 [M]	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	64.50 Acres	240 Bu/A	240-0-76 #/A	15 #/A	20 #/A	0 #/A	Total	205 #/A	0 #/A	76 #/A		0.7 t/A
									broadcast	30 #/A	0 #/A	38 #/A		
									banded w/planter	30 #/A	0 #/A	38 #/A		
									sidedress	145 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Alan Eck 966	3 2025	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	14.00 Acres	190 Bu/A	190-0-150 #/A	0 #/A	0 #/A	0 #/A	Total	190 #/A	0 #/A	150 #/A		0.9 t/A
									broadcast	30 #/A	0 #/A	110 #/A		
									banded w/planter	30 #/A	0 #/A	40 #/A		
									sidedress	130 #/A	0 #/A	0 #/A		
Alan Eck 966	3 2025	16 Barley/Double Crop Soybeans 7 28 3 4 30 41 44 142	14.00 Acres	100 Bu/A 40 Bu/A	100-0-145 #/A	0 #/A	0 #/A	0 #/A	Total	100 #/A	0 #/A	145 #/A		0.9 t/A
									tpdrs@ green-up	50 #/A	0 #/A	145 #/A		
									tpdrs @ Feekes 5-6	50 #/A	0 #/A	0 #/A		
Alan Eck 966	3 2025 [M]	74 Orchardgrss; Maint. 7 28 4 6 53 60 70 71 88 89 92 93 184 185 186	14.00 Acres	4.0 T/A	200-0-110 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	110 #/A		0.9 t/A
									tpdrs@ green-up	50 #/A	0 #/A	55 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	55 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Alan Eck 966	4 2025	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	2.40 Acres	190 Bu/A	190-0-150 #/A	0 #/A	0 #/A	0 #/A	Total	190 #/A	0 #/A	150 #/A		0.9 t/A
									broadcast	30 #/A	0 #/A	110 #/A		
									banded w/planter	30 #/A	0 #/A	40 #/A		
									sidedress	130 #/A	0 #/A	0 #/A		
Alan Eck 966	4 2025 [*]	74 Orchardgrss; Maint. 7 4 6 53 60 70 71 88 89 92 93 184 185 186	2.40 Acres	4.0 T/A	200-0-110 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	110 #/A		0.9 t/A
									tpdrs@ green-up	50 #/A	0 #/A	55 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	55 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		
Alan Eck 966	5 behind barn 2025	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	8.00 Acres	190 Bu/A	190-0-0 #/A	0 #/A	0 #/A	0 #/A	Total	190 #/A	0 #/A	0 #/A		1.4 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	160 #/A	0 #/A	0 #/A		

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Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Alan Eck 966	5 behind barn 2025	74 Orchardgrss; Maint. 7 28 4 6 53 60 70 71 88 89 92 93 184 185 186	8.00 Acres	4.0 T/A	200-0-0 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	0 #/A		0.9 t/A
									tpdrs@ green-up	50 #/A	0 #/A	0 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	0 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		
Alan Eck 966	5 behind barn 2025 [M]	16 Barley/Double Crop Soybeans 7 28 3 4 30 41 44 142	8.00 Acres	100 Bu/A 40 Bu/A	100-0-0 #/A	0 #/A	0 #/A	0 #/A	Total	100 #/A	0 #/A	0 #/A		1.4 t/A
									tpdrs@ green-up	50 #/A	0 #/A	0 #/A		
									tpdrs @ Feekes 5-6	50 #/A	0 #/A	0 #/A		
Alan Eck 966	6 2025	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	7.00 Acres	210 Bu/A	210-0-166 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	0 #/A	166 #/A		1.4 t/A
									broadcast	30 #/A	0 #/A	126 #/A		
									banded w/planter	30 #/A	0 #/A	40 #/A		
									sidedress	150 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Alan Eck 966	6 2025 [*]	74 Orchardgrss; Maint. 7 4 6 53 60 70 71 88 89 92 93 184 185 186	7.00 Acres	4.0 T/A	200-0-110 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	110 #/A		1.4 t/A
									tpdrs@ green-up	50 #/A	0 #/A	55 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	55 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		
Stevens	S1 2025	2 Corn grain, conservation till 1 2 3 27 60 92 93	14.00 Acres	210 Bu/A	210-0-0 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	0 #/A	0 #/A		0.0 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	180 #/A	0 #/A	0 #/A		
Stevens	S1 2025 [*]	10 Soybeans 3 4	14.00 Acres	60 Bu/A	0-0-0 #/A	0 #/A	0 #/A	0 #/A	Total	0 #/A	0 #/A	0 #/A		0.0 t/A
									brdcst/band @plntg	0 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
MAE VUE	1 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	46.00 Acres	210 Bu/A	210-0-0 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	0 #/A	0 #/A		0.0 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	180 #/A	0 #/A	0 #/A		
MAE VUE	2A 2025 [*]	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	10.00 Acres	210 Bu/A	210-0-0 #/A	15 #/A	0 #/A	0 #/A	Total	195 #/A	0 #/A	0 #/A		0.9 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	165 #/A	0 #/A	0 #/A		
MAE VUE	2B 2025 [*]	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	2.00 Acres	210 Bu/A	210-0-0 #/A	15 #/A	0 #/A	0 #/A	Total	195 #/A	0 #/A	0 #/A		0.9 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	165 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025						
Street Address		1437 Bridgetown Road				MDA operator no.			450						
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			3-5-2025						
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime	
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg		
MAE VUE	3A 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	14.50 Acres	210 Bu/A	210-0-68 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	0 #/A	68 #/A		0.0 t/A	
									broadcast	30 #/A	0 #/A	34 #/A			
									banded w/planter	30 #/A	0 #/A	34 #/A			
									sidedress	150 #/A	0 #/A	0 #/A			
MAE VUE	3B 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	2.50 Acres	210 Bu/A	210-0-68 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	0 #/A	68 #/A		0.0 t/A	
									broadcast	30 #/A	0 #/A	34 #/A			
									banded w/planter	30 #/A	0 #/A	34 #/A			
									sidedress	150 #/A	0 #/A	0 #/A			
MAE VUE	5 2025 [*]	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	13.00 Acres	210 Bu/A	210-0-0 #/A	15 #/A	0 #/A	0 #/A	Total	195 #/A	0 #/A	0 #/A		1.0 t/A	
									broadcast	0 #/A	0 #/A	0 #/A			
									banded w/planter	30 #/A	0 #/A	0 #/A			
									sidedress	165 #/A	0 #/A	0 #/A			

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025						
Street Address		1437 Bridgetown Road				MDA operator no.			450						
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			3-5-2025						
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime	
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg		
MAE VUE	6 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	36.00 Acres	210 Bu/A	210-0-0 #/A	15 #/A	0 #/A	0 #/A	Total	195 #/A	0 #/A	0 #/A		0.0 t/A	
									broadcast	0 #/A	0 #/A	0 #/A			
									banded w/planter	30 #/A	0 #/A	0 #/A			
									sidedress	165 #/A	0 #/A	0 #/A			
MAE VUE	7 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	4.30 Acres	200 Bu/A	200-0-64 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	64 #/A		0.0 t/A	
									broadcast	30 #/A	0 #/A	32 #/A			
									banded w/planter	30 #/A	0 #/A	32 #/A			
									sidedress	140 #/A	0 #/A	0 #/A			
MAE VUE	8 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	38.00 Acres	210 Bu/A	210-0-54 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	0 #/A	54 #/A		0.0 t/A	
									broadcast	30 #/A	0 #/A	27 #/A			
									banded w/planter	30 #/A	0 #/A	27 #/A			
									sidedress	150 #/A	0 #/A	0 #/A			

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025					
Street Address		1437 Bridgetown Road				MDA operator no.			450					
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			3-5-2025					
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
MAE VUE	9 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	13.00 Acres	210 Bu/A	210-0-0 #/A	15 #/A	0 #/A	0 #/A	Total	195 #/A	0 #/A	0 #/A		0.0 t/A
									broadcast	0 #/A	0 #/A	0 #/A		
									banded w/planter	30 #/A	0 #/A	0 #/A		
									sidedress	165 #/A	0 #/A	0 #/A		
MAE VUE	17 2025	2 Corn grain, conservation till 1 2 3 27 60 92 93	2.00 Acres	175 Bu/A	175-0-116 #/A	0 #/A	0 #/A	0 #/A	Total	175 #/A	0 #/A	116 #/A		0.0 t/A
									broadcast	30 #/A	0 #/A	76 #/A		
									banded w/planter	30 #/A	0 #/A	40 #/A		
									sidedress	115 #/A	0 #/A	0 #/A		
MAE VUE	17 2025 [*]	74 Orchardgrss; Maint. 4 6 53 60 70 71 88 89 92 93 184 185 186	2.00 Acres	3.0 T/A	150-0-84 #/A	0 #/A	0 #/A	0 #/A	Total	150 #/A	0 #/A	84 #/A		0.0 t/A
									tpdrs@ green-up	0 #/A	0 #/A	42 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	42 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025					
Street Address		1437 Bridgetown Road				MDA operator no.			450					
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			3-5-2025					
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
MAE VUE	18 2025	2 Corn grain, conservation till 28 1 2 3 27 60 92 93	11.50 Acres	175 Bu/A	175-0-116 #/A	0 #/A	0 #/A	0 #/A	Total	175 #/A	0 #/A	116 #/A		0.0 t/A
									broadcast	30 #/A	0 #/A	76 #/A		
									banded w/planter	30 #/A	0 #/A	40 #/A		
									sidedress	115 #/A	0 #/A	0 #/A		
MAE VUE	18 2025 [M]	74 Orchardgrss; Maint. 28 4 6 53 60 70 71 88 89 92 93 184 185 186	11.50 Acres	4.0 T/A	200-0-84 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	84 #/A		0.0 t/A
									tpdrs@ green-up	50 #/A	0 #/A	42 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	42 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		
MAE VUE	19 2025	2 Corn grain, conservation till 28 1 2 3 27 60 92 93	5.40 Acres	175 Bu/A	175-0-116 #/A	0 #/A	0 #/A	0 #/A	Total	175 #/A	0 #/A	116 #/A		0.0 t/A
									broadcast	30 #/A	0 #/A	76 #/A		
									banded w/planter	30 #/A	0 #/A	40 #/A		
									sidedress	115 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
MAE VUE	19 2025 [M]	74 Orchardgrss; Maint. 28 4 6 53 60 70 71 88 89 92 93 184 185 186	5.40 Acres	4.0 T/A	200-0-84 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	84 #/A		0.0 t/A
									tpdrs@ green-up	50 #/A	0 #/A	42 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	42 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		
MAE VUE	20 2025 [*]	74 Orchardgrss; Maint. 4 6 53 60 70 71 88 89 92 93 184 185 186	6.00 Acres	4.0 T/A	200-0-84 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	84 #/A		0.0 t/A
									tpdrs@ green-up	50 #/A	0 #/A	42 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	42 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		
MAE VUE	21 2025 [*]	74 Orchardgrss; Maint. 4 6 53 60 70 71 88 89 92 93 184 185 186	6.00 Acres	4.0 T/A	200-0-84 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	84 #/A		0.0 t/A
									tpdrs@ green-up	50 #/A	0 #/A	42 #/A		
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A		
									tpdrs late summer	50 #/A	0 #/A	42 #/A		
									tpdrs late fall	50 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025						
Street Address		1437 Bridgetown Road				MDA operator no.			450						
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			3-5-2025						
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime	
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg		
MAE VUE	22 2025 [*]	74 Orchardgrss; Maint. 4 6 53 60 70 71 88 89 92 93 184 185 186	7.80 Acres	4.0 T/A	200-0-84 #/A	0 #/A	0 #/A	0 #/A	Total	200 #/A	0 #/A	84 #/A		0.0 t/A	
									tpdrs@ green-up	50 #/A	0 #/A	42 #/A			
									tpdrs post hvst#1	50 #/A	0 #/A	0 #/A			
									tpdrs late summer	50 #/A	0 #/A	42 #/A			
									tpdrs late fall	50 #/A	0 #/A	0 #/A			

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck				Plan Year			2025						
Street Address	1437 Bridgetown Road				MDA operator no.			450						
City, State, Zip, County	Henderson, MD 21640 Queen Anne's				Date Plan Prepared			4-10-2025						
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Elevator Rd Farm	2 2025 [*]	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	97.00 Acres	210 Bu/A	210-78-70 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	78 #/A	70 #/A		1.1 t/A
									broadcast	30 #/A	39 #/A	35 #/A		
									banded w/planter	30 #/A	39 #/A	35 #/A		
									sidedress	150 #/A	0 #/A	0 #/A		
Elevator Rd Farm	2 2025	10 Soybeans 7 3 4	97.00 Acres	60 Bu/A	0-81-61 #/A	0 #/A	0 #/A	0 #/A	Total	0 #/A	81 #/A	61 #/A		1.1 t/A
									brdcst/band @plntg	0 #/A	81 #/A	61 #/A		
Elevator Rd Farm	2 2025	15 Wheat/Double Crop Soybeans 7 3 4 30 41 44 142	97.00 Acres	80 Bu/A 40 Bu/A	80-94-56 #/A	0 #/A	0 #/A	0 #/A	Total	80 #/A	94 #/A	56 #/A		1.1 t/A
									tpdrs@ green-up	40 #/A	94 #/A	56 #/A		
									tpdrs @ Feekes 5-6	40 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck				Plan Year			2025							
Street Address	1437 Bridgetown Road				MDA operator no.			450							
City, State, Zip, County	Henderson, MD 21640 Queen Anne's				Date Plan Prepared			4-10-2025							
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied						Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg		
Elevator Rd Farm	21 back 2025	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	31.00 Acres	210 Bu/A	210-42-0 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	42 #/A	0 #/A			0.7 t/A
									broadcast	0 #/A	0 #/A	0 #/A			
									banded w/planter	30 #/A	42 #/A	0 #/A			
									sidedress	180 #/A	0 #/A	0 #/A			
Elevator Rd Farm	21 back 2025 [M]	15 Wheat/Double Crop Soybeans 7 28 3 4 30 41 44 142	31.00 Acres	80 Bu/A 40 Bu/A	80-24-0 #/A	0 #/A	0 #/A	0 #/A	Total	80 #/A	24 #/A	0 #/A			0.7 t/A
									tpdrs@ green-up	40 #/A	24 #/A	0 #/A			
									tpdrs @ Feekes 5-6	40 #/A	0 #/A	0 #/A			
Elevator Rd Farm	4 middle 2025 [*]	2 Corn grain, conservation till 7 1 2 3 27 60 92 93	20.20 Acres	210 Bu/A	210-76-72 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	76 #/A	72 #/A			0.4 t/A
									broadcast	30 #/A	38 #/A	36 #/A			
									banded w/planter	30 #/A	38 #/A	36 #/A			
									sidedress	150 #/A	0 #/A	0 #/A			

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025					
Street Address		1437 Bridgetown Road				MDA operator no.			450					
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			4-10-2025					
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Elevator Rd Farm	4 middle 2025	15 Wheat/Double Crop Soybeans 7 3 4 30 41 44 142	20.20 Acres	80 Bu/A 40 Bu/A	80-92-60 #/A	0 #/A	0 #/A	0 #/A	Total	80 #/A	92 #/A	60 #/A		0.4 t/A
									tpdrs@ green-up	40 #/A	92 #/A	60 #/A		
									tpdrs @ Feekes 5-6	40 #/A	0 #/A	0 #/A		
Elevator Rd Farm	5 left 2025	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	71.00 Acres	210 Bu/A	210-95-0 #/A	0 #/A	0 #/A	0 #/A	Total	210 #/A	95 #/A	0 #/A		0.4 t/A
									broadcast	30 #/A	55 #/A	0 #/A		
									banded w/planter	30 #/A	40 #/A	0 #/A		
									sidedress	150 #/A	0 #/A	0 #/A		
Elevator Rd Farm	5 left 2025 [M]	15 Wheat/Double Crop Soybeans 7 28 3 4 30 41 44 142	71.00 Acres	80 Bu/A 40 Bu/A	80-122-0 #/A	0 #/A	0 #/A	0 #/A	Total	80 #/A	122 #/A	0 #/A		0.4 t/A
									tpdrs@ green-up	40 #/A	122 #/A	0 #/A		
									tpdrs @ Feekes 5-6	40 #/A	0 #/A	0 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator		Alan Eck				Plan Year			2025						
Street Address		1437 Bridgetown Road				MDA operator no.			450						
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			4-10-2025						
Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime	
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg		
Green View	GH1 2025 [*]	2 Corn grain, conservation till 1 2 3 27 60 92 93	8.80 Acres	190 Bu/A	190-0-52 #/A	0 #/A	0 #/A	0 #/A	Total	190 #/A	0 #/A	52 #/A		0.0 t/A	
									broadcast	30 #/A	0 #/A	26 #/A			
									banded w/planter	30 #/A	0 #/A	26 #/A			
									sidedress	130 #/A	0 #/A	0 #/A			
Green View	GH1 2025	16 Barley/Double Crop Soybeans 3 4 30 41 44 142	8.80 Acres	100 Bu/A 40 Bu/A	100-0-39 #/A	0 #/A	0 #/A	0 #/A	Total	100 #/A	0 #/A	39 #/A		0.0 t/A	
									tpdrs@ green-up	50 #/A	0 #/A	39 #/A			
									tpdrs @ Feekes 5-6	50 #/A	0 #/A	0 #/A			
Keeler	I 2025 [*]	10 Soybeans 7 3 4	17.00 Acres	60 Bu/A	0-0-50 #/A	0 #/A	0 #/A	0 #/A	Total	0 #/A	0 #/A	50 #/A		0.9 t/A	
									brdcst/band @plntg	0 #/A	0 #/A	50 #/A			

[*] - indicates primary recommendation used for the PMT calculation.

Fertilizer Recommendations

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	4-10-2025

Tract No. / Farm Name	Field No.	Crops & Note Numbers	Area	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Fertilizer To Be Applied					Lime
						Leg.	Man.	Slu.	Method	N	P2O5	K2O	Mg	
Keeler	2 2025 [*]	10 Soybeans 7 3 4	5.50 Acres	60 Bu/A	0-0-50 #/A	0 #/A	0 #/A	0 #/A	Total	0 #/A	0 #/A	50 #/A		0.9 t/A
									brdcst/band @plntg	0 #/A	0 #/A	50 #/A		
Keeler	3, 4, 5 2025 [*]	10 Soybeans 7 3 4	8.00 Acres	60 Bu/A	0-0-57 #/A	0 #/A	0 #/A	0 #/A	Total	0 #/A	0 #/A	57 #/A		0.9 t/A
									brdcst/band @plntg	0 #/A	0 #/A	57 #/A		

[*] - indicates primary recommendation used for the PMT calculation.

Additional Plan Notes

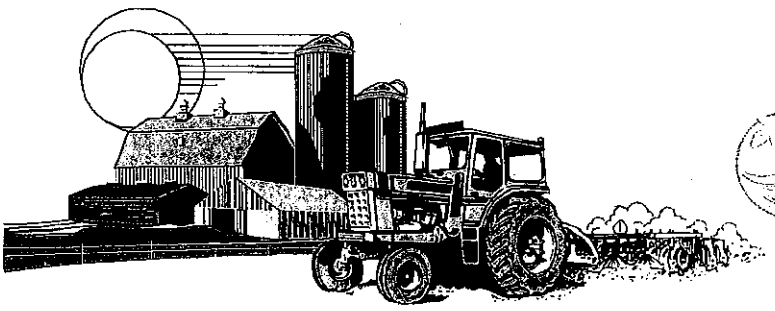
Farmer/Operator: Alan Eck

1. To satisfy TOTAL recommendation for many crops, it may be necessary to adjust SUGGESTED TIMING AND METHODS of application, (i.e. broadcast, topdress, sidedress, row, etc.) to be compatible with available equipment and materials.
2. These recommendations assume that the highest level of N management will be utilized and that N losses due to leaching, volatilization and denitrification are minimized due to best management practices.
3. For conventional tillage, ag-lime recommendations are based upon the amount of oxides required for the surface 8" of soil. Lime should be thoroughly mixed with the soil by plowing and disking. If recommended amount of oxides exceeds 1.5 tons of lime per acre (assuming 50% total oxides), ½ should be plowed down and the remainder applied after plowing and disked in thoroughly.
4. If topdressing ag-lime without tillage, reduce the total amount of oxides recommended by 50 percent. When topdressing ag-lime, and soil mixing is not possible, do not apply more than 1500 lbs per acre of oxides in any one application. The balance can be applied the next year. It would be best to do a soil test before making the second application.
5. Split-application of nitrogen is required for optimal production and nitrogen use efficiency of small grain crops and canola and for the protection of ground water resources.
6. Split-application of nitrogen is required for optimal production and nitrogen use efficiency of established pasture and hay land and for the protection of ground water resources.
7. When applying organic nutrient sources such as manures and sewage sludge/biosolids on alfalfa and clover, the optimal split- application is ½ the total rate in early spring (March) and ½ after the first cutting. If wet spring conditions eliminate the early spring application, apply ½ the total rate after the first cutting and 1/4 the total rate after both the third and fourth cuttings.
8. Proper timing of nutrient applications is important. Apply nutrient sources as close to planting or nutrient demand as possible so that nutrients are absorbed by plants quickly and not allowed to runoff into surface water or leach into ground water.
9. When applying liquid wastes, application rate should not exceed the soil's infiltration rate.
10. When potash recommendations for alfalfa/alfalfa-grass mixes and clover/clover-grass mixes are 300 lbs per acre or more, apply half after the first cutting and half after the 4th cutting (late August or early September).
11. Split application of nitrogen is required for optimal production and nitrogen use efficiency of summer annual forages, like forage-type sorghums, sudangrass, sorghum-sudangrass hybrids and millet, and for the protection of ground water resources.
12. To avoid possible boron toxicity damage to crops, apply boron in the broadcast fertilizer rather than in bands or as a sidedressing. Boron may be broadcast pre-plant as a soluble spray alone or with other compatible soluble chemicals.
13. The late summer topdress application for fescue, orchardgrass, reed canarygrass, bromegrass, timothy and perennial ryegrass, should be applied between mid-August and early September, depending on the sufficient rainfall to move the N into the soil.
14. When surface applying the following nitrogen fertilizers, adjust rates as follows: if UAN is surface broadcast, increase rate by 15-20%; if UAN is dribbled or streamed, increase rate by 5-10%; if granulated urea is broadcast, increase rate by 25%.
15. When surface applying the following nitrogen fertilizers, adjust rates as follows: if UAN is surface broadcast, increase rate by 15-20%; if UAN is dribbled or streamed, increase rate by 5-10%; if granulated urea is broadcast, increase rate by 25%.

CHECK LIST

ITEMS Farmer Needs For Nutrient Mgmt Inspections

ITEM	" √ "
All nutrient management plans and updates for the last 3 years.	
A record of crops and actual yields for the last 5 years.	
Analysis of nutrients (all forms) applied to plants and/or crop acreage.	
Soil analysis results for the entire agricultural operation.	
Receipts related to the purchase of nutrients.	
Documentation of when and where nutrients were applied to specified fields; in reference to amounts, farm, and field location.	
Documentation to justify any changes from the Nutrient Management Plan as written.	
Documentation of manure spreader calibrations; how and when each spreader was calibrated.	
A current Annual Implementation Report (AIR) filed with the Department of Agriculture.	
If operator is an applicator of nutrients to 10 acres or more; operator must hold a current Maryland Nutrient Applicator's Voucher.	



Agronomics plus
717-792-1274

Soil Summary from Spectrum Labs

Farm	Field	Acres	Last Test	Crop			OM	CEC	pH	P	P	K	% Saturation		
				2023	2024	2025				ppm	FIV	ppm	K	Mg	Ca
Mueller	M4	9.9	02/20/25	TRI/CS	TRI/CS	A25	2.48	4.5	6.2	134	148	122	7	18	64
Mueller	M5	89.7	02/20/25	CS	A24	A	2.17	4.8	6.6	51	58	198	11	24	58
Mueller	M6	18.6	02/20/25	PAST	PAST	PAST	4.13	7.5	6.6	128	142	290	10	21	62
Payne	P1	23.1	01/05/24	PAST	PAST	PAST	5.10	7.9	6.2	39	45	190	6	24	59
Rigdon	R1	13.7	02/20/25	TRI/SB	TRI/CS	A25	2.97	6.1	6.8	128	142	190	8	26	61
Rigdon	R2	9.1	02/20/25	TRI/SB	TRI/CS	A25	3.00	6.2	6.7	146	161	179	7	27	59
Rigdon	R3	65.7	02/20/25	TRI/SB	TRI/CS	TRI/SORG	2.86	6.9	6.8	84	94	135	5	26	63
Rigdon	R4A	118.8	02/20/25	A23	TRI/CS	TRI/CS	2.43	5.8	6.4	40	46	95	4	26	60
Rigdon	R4B	\	02/20/25			TRI/CS	2.45	4.9	6.6	41	47	100	5	27	61
Silcox	S1	24.1	02/20/25	TRI/CS	TRI/CS	SB	2.15	4.6	6.1	107	119	105	6	21	60
Silcox	S2	7.9	02/20/25	TRI/CS	SORG	TRI/CS	3.22	7.5	6.7	76	85	274	9	23	62
Silcox	S3	12.1	02/20/25	CS	SORG	TRI/CS	3.38	7.7	6.7	102	113	302	10	24	60
Silcox	S4	23.3	02/20/25	CS	TRI/CS	SORG	1.98	4.3	6.2	106	118	112	7	23	58
Unruh	UNRUH	16.5	02/20/25	GH	GH	GH	4.21	7.9	6.5	43	49	82	3	23	66
Wiedenmayer	W1	38.8	02/20/25	TRI/CS	W/SORG	TRI/SORG	2.11	4.8	6.6	66	74	157	8	22	63
Wiedenmayer	W2	2.6	02/20/25	TRI/CS	W/SORG	SB	3.34	6.6	6.5	18	22	132	5	24	63
Wiedenmayer	W3	8.0	02/20/25	TRI/CS	W/SORG	SB	3.17	6.0	6.5	18	22	133	6	23	63
Wiedenmayer	W4	28.6	02/20/25	GH	GH	GH	2.70	5.2	6.1	37	42	71	4	27	56
Wiedenmayer	W5	14.4	02/20/25	TRI/CS	SORG	TRI/CS	3.22	6.4	6.3	42	48	218	9	23	58
Wiedenmayer	W6	25.4	02/20/25	SORG	W/SORG	TRI/CS	2.64	5.0	6.5	27	31	82	4	24	64
Wiedenmayer	W7	8.7	02/20/25	GH	GH	GH	4.21	6.3	6.2	34	39	108	4	29	55
Wiedenmayer	W8	50.4	02/20/25	TRI/CS	CS	SB	3.04	4.8	6.2	37	42	172	9	22	58
Wiedenmayer	W9	37.8	02/20/25	PAST	PAST	PAST	2.80	6.2	6.6	18	22	140	6	25	62

Soil Summary from Spectrum Labs

Farm	Field	Acres	Last Test	Crop			OM	CEC	pH	P	P	K	% Saturation		
				2023	2024	2025				ppm	FIV	ppm	K	Mg	Ca
Cooper	C1	65.2	02/20/25	SORG	TRI/CS	TRI/SB	3.17	5.2	6.7	89	99	287	14	25	55
Cooper	C2	137.4	02/20/25	SORG	TRI/CS	A25	2.72	5.5	6.8	77	86	318	15	26	53
Cooper	C3	138.8	02/20/25	A	A	A/CS	2.94	5.7	6.5	86	96	142	6	20	66
Davis	DAVIS1	15.3	02/20/25	PAST	PAST	PAST	3.72	6.6	6.5	61	68	232	9	22	61
Davis	DAVIS2	9.1	02/20/25	PAST	PAST	PAST	4.27	6.5	6.2	63	71	288	11	24	53
Home	F20	51.5	02/20/25	SORG	SORG	TRI	4.05	8.0	6.7	119	132	478	15	23	56
Home	F22	43.1	02/20/25	**PAST**	**PAST**	**PAST**	3.71	6.9	6.4	136	150	395	15	23	53
Home	F23	16.6	02/20/25	PAST	PAST	PAST	3.32	6.9	6.3	90	100	311	12	23	55
Home	F24A	19.5	02/20/25	SORG	PAST	PAST	3.47	6.7	6.3	101	112	257	10	21	58
Home	F24B	20.3	02/20/25	PAST	PAST	PAST	3.20	7.0	6.9	90	100	387	14	23	58
Home	F24C	33.1	02/20/25	SORG	W/CS	TRI/A25	4.24	7.5	6.8	86	96	334	11	22	61
Home	F24D	29.7	02/20/25	SORG	W/CS	TRI/A25	2.34	6.0	6.7	32	37	188	8	23	63
Home	F24E	4.5	02/20/25	GH	GH	GH	4.32	7.5	5.8	53	60	211	7	23	52
Home	F25	24.2	02/20/25	PAST	PAST	PAST	2.61	8.4	6.5	122	135	427	13	25	54
Home	F26	31.7	02/20/25	**PAST**	**PAST**	**PAST**	5.48	11.9	6.1	236	259	541	12	23	52
Home	F27	7.8	02/20/25	**PAST**	**PAST**	**PAST**	4.30	10.3	6.2	207	228	439	11	22	56
Home	RH1	10.0	02/20/25	PAST	PAST	PAST	4.36	8.2	6.2	125	138	341	11	18	59
Home	Horse	2.0	01/05/24	PAST	PAST	PAST	3.90	6.5	6.6	73	82	113	4	22	65
Hoon	H1A	140.0	02/20/25	CS	SORG	SB	3.02	6.1	6.6	41	47	191	8	24	61
Hoon	H1B	\	02/20/25	SORG	SORG	SB	2.76	6.4	6.5	37	42	213	8	24	60
KRM	KRM1	24.2	02/20/25	CS	A24	A	3.25	5.8	5.9	44	50	85	4	24	56
KRM	KRM2	10.8	02/20/25	GH	GH	GH	4.89	7.1	6.1	22	26	56	2	24	60
KVD	KVD1	6.0	02/20/25	SORG	SORG	TRI	3.90	10.5	6.8	140	155	497	12	22	60
KVD	KVD2	19.8	02/20/25	SORG	TRI/CS	TRI/A25	2.81	8.2	6.9	101	112	246	8	23	64
KVD	KVD3	34.8	02/20/25	SORG	TRI/CS	TRI/A25	3.38	8.3	7.0	86	96	271	8	23	65
KVD	KVD4	32.5	02/20/25	PAST	PAST	PAST	2.56	4.6	6.7	70	78	161	9	25	650
KVD	KVD5	29.3	02/20/25	PAST	PAST	PAST	3.38	7.5	6.6	88	98	231	8	22	63
Levertines	L1	7.0	02/20/25	GH	GH	GH	5.80	10.1	6.3	136	150	462	12	24	54
Meck	MK1A	103.2	02/20/25	TRI/CS	SB	CS	1.94	3.7	6.2	110	122	227	16	22	51
Meck	MK1B	38.7	02/20/25	TRI/SB	TRI/CS	CS	2.26	4.2	6.3	70	78	190	11	23	56
Meck	MK2	23.1	02/20/25	SB	TRI/CS	A25	2.69	5.2	6.3	114	126	161	8	18	64
Meck	MK3	9.8	02/20/25	SB	TRI/CS	A25	2.31	4.7	6.5	81	90	151	8	22	62
Mueller	M1	50.8	02/20/25	A	TRI/CS	CS	2.48	4.3	6.1	84	94	77	5	21	60
Mueller	M2	12.6	02/20/25	PAST	PAST	PAST	1.83	4.5	6.6	109	121	86	5	23	65
Mueller	M3	15.3	02/20/25	PAST	PAST	PAST	2.87	5.0	6.2	66	74	99	5	23	60

Summary of Nutrient Recommendations

Farm	Field	Acres	Crop	Yield Goal[1]	Actual Nutrient Recommendations						
					Lime	Manure[2]	Nitrogen[3] Credit	Starter[4]	Additional Commercial Fertilizers		
			2025	(Bu/A)	(ton/ac)	(ton/ac)		(lb/ac)	N	P_2O_5	K_2O
Cooper	C1	65.2	TRI/SB	4T/60		5,000(F) inj 5,000(Sp)	157				
Cooper	C2	137.4	A25	6T		5,000(Sp)	107				
Cooper	C3	138.8	A/CS	2T/28T		13,000(Sp) inj	212		0	0	90
Davis	DAVIS1	15.3	PAST	4T		5,000(Sp) 25T uncoll	120				
Davis	DAVIS2	9.1	PAST	4T		5,000(Sp) 25T uncoll	120				
Home	F20	51.5	TRI	4T		5,000(F) inj 5,000(Sp)	124				
Home	F22	43.1	PAST	4T		5,000(Sp) 25T uncoll	120				
Home	F23	16.6	PAST	4T		5,000(Sp) 25T uncoll	111				
Home	F24A	19.5	PAST	4T		5,000(Sp) 25T uncoll	111				
Home	F24B	20.3	PAST	4T		5,000(Sp) 25T uncoll	111				
Home	F24C	33.1	TRI/A25	4T		5,000(F) inj 5,000(Sp)	157				
Home	F24D	29.7	TRI/A25	4T		5,000(F) inj 5,000(Sp)	145		0	0	150
Home	F24E	4.5	GH	4T	1T Cal	5,000(Sp)	62				
Home	F25	24.2	PAST	4T		5,000(Sp) 25T uncoll	120				
Home	F26	31.7	PAST	4T		5,000(Sp) 25T uncoll	120				
Home	F27	7.8	PAST	4T		5,000(Sp) 25T uncoll	120				
Home	RH1	10	PAST	4T		5,000(Sp) 25T uncoll	120				
Home	Horse	2	PAST	4T		5,000(Sp) 25T uncoll	120				
Hoon	H1A	140	SB	60		8,000(F)inj KVD	86				
Hoon	H1B	\	SB	60		8,000(F)inj KVD	77				
KRM	KRM1	24.2	A	8T	1T Cal	5,000(Sp)	87		0	0	150

Summary of Nutrient Recommendations

KRM	KRM2	10.8	GH	4T		5,000(Sp)	74				
KVD	KVD1	6	TRI	4T		5,000(F) inj 5,000(Sp) KVD	91				
KVD	KVD2	19.8	TRI/A25	4T		5,000(F) inj 5,000(Sp) KVD	116				
KVD	KVD3	34.8	TRI/A25	4T		5,000(F) inj 5,000(Sp) KVD	116				
KVD	KVD4	32.5	PAST	4T		5,000(Sp)KVD 25T uncoll	104				
KVD	KVD5	29.3	PAST	4T		5,000(Sp)KVD 25T uncoll	104				
Levertines	L1	7	GH	4T		5,000(Sp)	58				
Meck	MK1A	103.2	CS	28T		8,000(F)inj KVD 13,000(Sp)inj	159		50	0	0
Meck	MK1B	38.7	CS	28T		8,000(F)inj KVD 13,000(Sp)inj	173				
Meck	MK2	23.1	A25	6T	1T Mag	8,000(F)	97		0	0	150
Meck	MK3	9.8	A25	6T	1T Mag	8,000(F)	97		0	0	150
Mueller	M1	50.8	CS	28T		20T Pack	90		110	0	0
Mueller	M2	12.6	PAST	4T		5,000KVD	58				
Mueller	M3	15.3	PAST	4T		5,000KVD	58				
Mueller	M4	9.9	A25	6T	1T Mag	10T Pack	94		0	0	150
Mueller	M5	89.7	A	8T		5,000KVD	70				
Mueller	M6	18.6	PAST	4T		5,000KVD	58				
Payne	P1	23.1	PAST	4T		12T uncoll	37				
Rigdon	R1	13.7	A25	6T		8,000(F)inj KVD	116		0	0	150
Rigdon	R2	9.1	A25	6T		8,000(F)inj KVD	116		0	0	150
Rigdon	R3	65.7	TRI/SORG	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	181		40/40	0/0	0/0
Rigdon	R4A	118.8	TRI/CS	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	181		40/40	0/0	0/0
Rigdon	R4B	\	TRI/CS	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	181				
Silcox	S1	24.1	SB	60		5,000KVD	100				
Silcox	S2	7.9	TRI/CS	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	156		50/50	0/0	0/0
Silcox	S3	12.1	TRI/CS	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	156		50/50	0/0	0/0
Silcox	S4	23.3	SORG	28T		13,000(Sp)inj KVD	132				

Summary of Nutrient Recommendations

Unruh	UNRUH	16.5	GH	4T		5,000	71				
Wiedenmayer	W1	38.8	TRI/SORG	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	181		50/50	0/0	0/0
Wiedenmayer	W2	2.6	SB	60		5,000(Sp)KVD	100				
Wiedenmayer	W3	8	SB	60		5,000(Sp)KVD	100				
Wiedenmayer	W4	28.6	GH	4T		5,000(Sp)KVD	49				
Wiedenmayer	W5	14.4	TRI/CS	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	142		50/50	0/0	0/0
Wiedenmayer	W6	25.4	TRI/CS	4T/28T		8,000(F)inj KVD 13,000(Sp)inj	172		50/50	0/0	0/0
Wiedenmayer	W7	8.7	GH	4T		5,000(Sp)KVD	49				
Wiedenmayer	W8	50.4	SB	60		5,000(Sp)KVD	93				
Wiedenmayer	W9	37.8	PAST	4T		5,000(Sp)KVD	58				

1.	Yield goal based on past history.
2.	Liquid manure, from the home farm, injected at 5,000gal/ acre provides 50-15-76, at 8,000gal/acre, 80-24-122, and at 13,000gal/acre it provides 130-39-198. When applied at 5,000gal/acre, manure will provide 37-15-76. Liquid manure (KVD), when injected, will provide 25-15-54 at 5,000gal/acre, 40-24-86 at 8,000gal/acre, and 65-39-140 at 13,000gal/acre. When applied at 5,000gal it will provide 24-15-54. Bed pack applied at 10T/acre provides18-23-32, and at 20T/acre will provide 36-46-64. Uncollected manure will provide 22-28-38 at 12T/ acre, and 46-58-79 at 25T/acre.
3.	Nitrogen credit includes current and past manure applications as well as previous legume crop.
4.	No starter applied.
5.	Additional Fertilizer-
	Corn- Split apply indicated nitrogen with herbicides and at sidedress.
	Soybeans- No additional fertilizer recommended.
	Sorghum- Apply indicated fertilizer where recommended.
	Pasture, Mixed Hay, and Grass Hay- Apply indicated fertilizer at green-up in the spring.

Alfalfa and other legumes – It is recognized by both the planner and the grower that nitrogen is not needed for these crops. The fertilizer blend used had the lowest possible nitrogen value while still providing other nutrients needed by the crop.

Report Number: 22-349-0517
Account Number: [redacted]

GROWMARK FS, Inc.
PHONE: (302) 422-3001 • P.O. BOX 308 • N.E. FRONT ST. • MILFORD, DELAWARE
PHONE: (302) 875-7511 • 431 N. POPLAR ST • MILFORD, DELAWARE

Send To: Growmark FS
1002 Hope Road
Centreville MD 21617

Grower: Alan Ekc
Elv. Rd

SOIL ANALYSIS REPORT

Analytical Method(s): Mehlich 3 SMP Buffer pH Loss On Ignition Water pH

Date Received: 12/15/2022 **Date Of Analysis:** 12/16/2022 **Date Of Report:** 12/16/2022

Sample ID / Field ID	Lab Number	OM % Rate	W/V Soil Class	ENR lbs/A	Phosphorus M3 ppm Rate	Phosphorus ppm Rate	Phosphorus ppm Rate	Potassium K ppm Rate	Magnesium Mg ppm Rate	Calcium Ca ppm Rate	Sodium Na ppm Rate	pH Soil pH	pH Buffer Index	Acidity H meq/100g	C.E.C meq/100g
2	16043	1.9 L		80	40 M MD = 46			115 M MD = 73	124 H MD = 97	565 M MD = 45	15 VL	5.6	6.80	1.3	5.5
4	16045	2.3 L		88	41 M MD = 47			111 M MD = 70	128 H MD = 100	732 M MD = 66	11 VL	6.2		0.7	5.8
5 Front	16046	2.1 L		82	29 L MD = 34			192 VH MD = 123	181 H MD = 140	783 M MD = 72	19 VL	6.2		0.8	6.8
5 Back	16047	2.5 L		91	29 L MD = 34			169 VH MD = 108	150 H MD = 117	749 M MD = 68	11 VL	6.2		0.8	6.3
21	16048	1.9 L		81	87 H MD = 97			168 VH MD = 107	89 H MD = 70	549 M MD = 43	14 VL	5.9	6.85	0.8	4.8

Sample ID / Field ID	Percent Base Saturation K %	Mg %	Ca %	Na %	H %	Nitrate NO_3N ppm Rate	Sulfur S ppm Rate	Zinc Zn ppm Rate	Manganese Mn ppm Rate	Iron Fe ppm Rate	Copper Cu ppm Rate	Boron B ppm Rate	Soluble Salts SS ms/cm Rate		
2	5.4	18.8	51.4	1.2	23.6		10 L	3.1 M	19 M	111 VH	1.7 H	0.2 VL			
4	4.9	18.4	63.1	0.8	12.1		9 VL	2.4 M	13 M	111 VH	1.6 H	0.4 L			
5 Front	7.2	22.2	57.6	1.2	11.8		18 M	3.5 H	16 M	115 VH	2.0 H	0.5 L			
5 Back	6.9	19.8	59.4	0.8	12.7		8 VL	4.4 H	50 H	108 VH	2.0 H	0.4 L			
21	9.0	15.5	57.2	1.3	16.7		13 L	4.1 H	23 H	100 VH	2.6 H	0.3 VL			

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by:

Brandi Watson

Soil Test Results

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	4-10-2025

Tract No.	Field No.	Lab	Test Date	Soil Texture	Test Number	pH	O.M	P	K	Mg	Ca	Al	Fe
Elevator Rd Farm	2	WPT	12/16/22	SiL	16043	5.60	1.90	40	115	124	565		
					Conversion to FIV	**5.60**	**1.90**	**46 (M)**	**73 (O)**	**97 (O)**	**45 (M)**		
Elevator Rd Farm	21 back	WPT	12/16/22	SiL	16048	5.90	1.90	87	168	89	549		
					Conversion to FIV	**5.90**	**1.90**	**97 (O)**	**107 (E)**	**70 (O)**	**43 (M)**		
Elevator Rd Farm	4 middle	WPT	12/16/22	SiL	16045	6.20	2.30	41	111	128	732		
					Conversion to FIV	**6.20**	**2.30**	**47 (M)**	**70 (O)**	**100 (O)**	**66 (O)**		
Elevator Rd Farm	5 left	WPT	12/16/22	SiL	16046	6.20	2.10	29	192	181	783		
					Conversion to FIV	**6.20**	**2.10**	**34 (M)**	**123 (E)**	**140 (E)**	**72 (O)**		
Green View	GH1	WPT	12/16/22	SiL	16049	6.80	2.30	91	135	163	1182		
					Conversion to FIV	**6.80**	**2.30**	**101 (E)**	**86 (O)**	**126 (E)**	**122 (E)**		
Keeler	1	WPT	3/3/25	SL	14970	6.00	2.80	133	157	180	868		
					Conversion to FIV	**6.00**	**2.80**	**147 (E)**	**100 (O)**	**139 (E)**	**83 (O)**		
Keeler	2	WPT	3/3/25	SL	14970	6.00	2.80	133	157	180	868		
					Conversion to FIV	**6.00**	**2.80**	**147 (E)**	**100 (O)**	**139 (E)**	**83 (O)**		
Keeler	3, 4, 5	WPT	3/3/25	SL	14971	6.00	2.40	148	132	133	876		
					Conversion to FIV	**6.00**	**2.40**	**163 (E)**	**84 (O)**	**104 (E)**	**84 (O)**		

Soil Test Results

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No.	Field No.	Lab	Test Date	Soil Texture	Test Number	pH	O.M	P	K	Mg	Ca	Al	Fe
MAE VUE	18	WPT	03/03/2025	SL	14994	6.20	2.70	123	59	188	1106		
					Conversion to FIV	**6.20**	**2.70**	**136 (E)**	**36 (M)**	**145 (E)**	**113 (E)**		
MAE VUE	19	WPT	03/03/2025	SL	14994	6.20	2.70	123	59	188	1106		
					Conversion to FIV	**6.20**	**2.70**	**136 (E)**	**36 (M)**	**145 (E)**	**113 (E)**		
MAE VUE	20	WPT	03/03/2025	SL	14994	6.20	2.70	123	59	188	1106		
					Conversion to FIV	**6.20**	**2.70**	**136 (E)**	**36 (M)**	**145 (E)**	**113 (E)**		
MAE VUE	21	WPT	03/03/2025	SL	14994	6.20	2.70	123	59	188	1106		
					Conversion to FIV	**6.20**	**2.70**	**136 (E)**	**36 (M)**	**145 (E)**	**113 (E)**		
MAE VUE	22	WPT	03/03/2025	SL	14994	6.20	2.70	123	59	188	1106		
					Conversion to FIV	**6.20**	**2.70**	**136 (E)**	**36 (M)**	**145 (E)**	**113 (E)**		

Soil Test Results

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No.	Field No.	Lab	Test Date	Soil Texture	Test Number	pH	O.M	P	K	Mg	Ca	Al	Fe
MAE VUE	2B	WPT	03/03/2025	SL	14988	6.00	5.80	177	316	287	2013		
					Conversion to FIV	**6.00**	**5.80**	**195 (E)**	**203 (E)**	**220 (E)**	**227 (E)**		
MAE VUE	3A	WPT	03/03/2025	SL	14989	6.40	1.60	151	120	287	2013		
					Conversion to FIV	**6.40**	**1.60**	**166 (E)**	**76 (O)**	**220 (E)**	**227 (E)**		
MAE VUE	3B	WPT	03/03/2025	SL	14989	6.40	1.60	151	120	287	2013		
					Conversion to FIV	**6.40**	**1.60**	**166 (E)**	**76 (O)**	**220 (E)**	**227 (E)**		
MAE VUE	5	WPT	03/03/2025	SL	14990	5.90	2.40	227	181	127	879		
					Conversion to FIV	**5.90**	**2.40**	**249 (E)**	**115 (E)**	**99 (O)**	**84 (O)**		
MAE VUE	6	WPT	03/03/2025	SL	14991	6.20	2.30	172	171	141	980		
					Conversion to FIV	**6.20**	**2.30**	**189 (E)**	**109 (E)**	**110 (E)**	**97 (O)**		
MAE VUE	9	WPT	03/03/2025	SL	14993	6.40	2.70	265	183	197	1284		
					Conversion to FIV	**6.40**	**2.70**	**290 (E)**	**117 (E)**	**152 (E)**	**135 (E)**		
MAE VUE	7	WPT	03/03/2025	SL	14989	6.40	1.60	151	120	287	2013		
					Conversion to FIV	**6.40**	**1.60**	**166 (E)**	**76 (O)**	**220 (E)**	**227 (E)**		
MAE VUE	8	WPT	03/03/2025	SL	14992	6.20	1.90	123	145	123	777		
					Conversion to FIV	**6.20**	**1.90**	**136 (E)**	**92 (O)**	**96 (O)**	**71 (O)**		
MAE VUE	17	WPT	03/03/2025	SL	14994	6.20	2.70	123	59	188	1106		
					Conversion to FIV	**6.20**	**2.70**	**136 (E)**	**36 (M)**	**145 (E)**	**113 (E)**		

See the actual soil test results which follow this page, along with the soil test Phosphorus conversions to the Fertility Index Value (FIV).

Soil Test Results

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No.	Field No.	Lab	Test Date	Soil Texture	Test Number	pH	O.M	P	K	Mg	Ca	Al	Fe
Alan Eck 966	1	WPT	12/16/22	SiL	16014	6.60	2.30	161	160	123	985		
					Conversion to FIV	**6.60**	**2.30**	**177 (E)**	**102 (E)**	**96 (O)**	**98 (O)**		
Alan Eck 966	2	WPT	12/16/22	SiL	16015	5.90	3.40	230	126	159	1043		
					Conversion to FIV	**5.90**	**3.40**	**252 (E)**	**80 (O)**	**123 (E)**	**105 (E)**		
Alan Eck 966	3	WPT	12/16/22	SiL	16016	5.80	2.00	96	43	100	791		
					Conversion to FIV	**5.80**	**2.00**	**107 (E)**	**26 (M)**	**79 (O)**	**73 (O)**		
Alan Eck 966	4	WPT	12/16/22	SiL	16016	5.80	2.00	96	43	100	791		
					Conversion to FIV	**5.80**	**2.00**	**107 (E)**	**26 (M)**	**79 (O)**	**73 (O)**		
Alan Eck 966	5 behind barn	WPT	12/16/22	SiL	16017	5.40	5.10	160	262	195	1490		
					Conversion to FIV	**5.40**	**5.10**	**176 (E)**	**168 (E)**	**151 (E)**	**161 (E)**		
Alan Eck 966	6	WPT	12/16/22	SiL	16016	5.80	2.00	96	43	100	791		
					Conversion to FIV	**5.80**	**2.00**	**107 (E)**	**26 (M)**	**79 (O)**	**73 (O)**		
Stevens	S1	WPT	03/03/2025	SL	14987	6.30	1.70	128	180	74	1006		
					Conversion to FIV	**6.30**	**1.70**	**141 (E)**	**115 (E)**	**59 (O)**	**100 (O)**		
MAE VUE	1	WPT	03/03/2025	SL	14987	6.30	1.70	128	180	74	1006		
					Conversion to FIV	**6.30**	**1.70**	**141 (E)**	**115 (E)**	**59 (O)**	**100 (O)**		
MAE VUE	2A	WPT	03/03/2025	SL	14988	6.00	5.80	177	316	287	2013		
					Conversion to FIV	**6.00**	**5.80**	**195 (E)**	**203 (E)**	**220 (E)**	**227 (E)**		

Recommendations using Organic Nutrient Sources

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Area	Crops & Note Numbers	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Nutrient Sources to be Applied						
						Leg.	Man.	Slu.	Organic Nutrient Sources					Commercial Fertilizer N-P2O5-K2O	Lime
									Type / Source	Min. Rate	Applic. Rate [Time Inc.]	Organic Waste Applic- Basis	Available N-P2O5-K2O		
Alan Eck 966	1 2025 [*]	45.00 Acres	2 Corn grain, conservation till 28 1 2 3 27 60 92 93	210 Bu/A	210- 0- 0 #/A	0 #/A	5 #/A	0 #/A	(1) Pltr, Int +L	0.50	1.0 tons/A [8-14 days]	Preset Rate	38- 77- 70 #/A	167- 0- 0 #/A	0.0 t/A
Alan Eck 966	2 2025 [*]	64.50 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	240 Bu/A	240- 0- 76 #/A	15 #/A	20 #/A	0 #/A	(1) Pltr, Int +L	0.50	2.0 tons/A [> 14 days]	Preset Rate	76- 154- 140 #/A	129- 0- 0 #/A	0.7 t/A
Alan Eck 966	3 2025	14.00 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	190 Bu/A	190- 0- 150 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	2.0 tons/A [> 14 days]	Preset Rate	76- 154- 140 #/A	114- 0- 10 #/A	0.9 t/A
Alan Eck 966	5 behind barn 2025	8.00 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	190 Bu/A	190- 0- 0 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	2.0 tons/A [No Till]	Preset Rate	76- 154- 140 #/A	114- 0- 0 #/A	1.4 t/A
MAE VUE	18 2025	11.50 Acres	2 Corn grain, conservation till 28 1 2 3 27 60 92 93	175 Bu/A	175- 0- 116 #/A	0 #/A	0 #/A	0 #/A	(3) Swine Fr	0.50	7.0 tons/A [No Till]	Preset Rate	92- 171- 175 #/A	83- 0- 0 #/A	0.0 t/A
MAE VUE	19 2025	5.40 Acres	2 Corn grain, conservation till 28 1 2 3 27 60 92 93	175 Bu/A	175- 0- 116 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	1.0 tons/A [No Till]	Preset Rate	38- 77- 70 #/A	137- 0- 46 #/A	0.0 t/A

Recommendations using Organic Nutrient Sources with Split Applications

Farmer/Operator	Alan Eck	Plan Year	2025
Street Address	1437 Bridgetown Road	MDA operator no.	450
City, State, Zip, County	Henderson, MD 21640 Queen Anne's	Date Plan Prepared	3-5-2025

Tract No. / Farm Name	Field No.	Area	Crops & Note Numbers	Yield Goal	Plant Nutrients Needed N-P2O5-K2O (Lbs./Acre)	Nitrogen Credits (lbs/A)			Nutrient Sources to be Applied						Com Fert N-P-K	Lime
						Leg.	Man.	Slu.	Method	N-P2O5-K2O	Organic Sources					
											Type / Source	Min. Rate	Applic. Rate [Days Inc.]	Organic Waste Applic- Basis		
MAE VUE	19 2025 [*]	5.40 Acres	74 Orchardgrss; Maint. 28 4 6 53 60 70 71 88 89 92 93 184 185 186	4.0 T/A	200- 0- 84 #/A	0 #/A	0 #/A	0 #/A	Total	38- 77- 70 #/A				Preset Rate	162-0- 14 #/A	0.0 t/A
									after hvst-1	38- 77- 70 #/A	(1) Pltr, Int +L	0.50	1.0 tons/A [No Till]			

Recommendations using Organic Nutrient Sources

Farmer/Operator		Alan Eck				Plan Year			2025							
Street Address		1437 Bridgetown Road				MDA operator no.			450							
City, State, Zip, County		Henderson, MD 21640 Queen Anne's				Date Plan Prepared			4-10-2025							
Tract No. / Farm Name	Field No.	Area	Crops & Note Numbers	Yield Goal	Plant Nutrients Needed N-P2O5-K2O	Nitrogen Credits			Nutrient Sources to be Applied							
						Leg.	Man.	Slu.	Organic Nutrient Sources					Commercial Fertilizer N-P2O5-K2O	Lime	
									Type / Source	Min. Rate	Applic. Rate [Time Inc.]	Organic Waste Applic- Basis	Available N-P2O5-K2O			
Elevator Rd Farm	2 2025 [*]	97.00 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	210 Bu/A	210- 78- 70 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	3.0 tons/A [6-7 days]	Preset Rate	116- 230- 211 #/A	94- 0- 0 #/A	1.1 t/A	
Elevator Rd Farm	21 back 2025	31.00 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	210 Bu/A	210- 42- 0 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	3.0 tons/A [8-14 days]	Preset Rate	115- 230- 211 #/A	95- 0- 0 #/A	0.7 t/A	
Elevator Rd Farm	4 middle 2025 [*]	20.20 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	210 Bu/A	210- 76- 72 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	3.0 tons/A [6-7 days]	Preset Rate	116- 230- 211 #/A	94- 0- 0 #/A	0.4 t/A	
Elevator Rd Farm	5 left 2025	71.00 Acres	2 Corn grain, conservation till 7 28 1 2 3 27 60 92 93	210 Bu/A	210- 95- 0 #/A	0 #/A	0 #/A	0 #/A	(1) Pltr, Int +L	0.50	3.0 tons/A [8-14 days]	Preset Rate	115- 230- 211 #/A	95- 0- 0 #/A	0.4 t/A	

Summary of Nutrient Recommendations
including the UM maximum nutrient
recommendation allowances based on soil test results

UNIVERSITY OF MARYLAND EXTENSION
Solutions for your community

POULTRY LITTER QUANTITY ESTIMATE

Name: **Alan Eck** Tract / Farm: **Eck's Long Marsh F** Date: **10/1/2024**

Houses included: **3** **Bird type:** **Roaster**

Average Bird Market Weight (lbs): **7.5**

A.	Years between total cleanouts: Yr. next total cleanout:	**2027**
	- Yr. last total cleanout:	**2023**
	= Years in cleanout cycle:	4
B.	Total # of birds per flock (for all houses on this cleanout cycle):	**108,000**
C.	Flocks per year	**4.5**
D.	Number of flocks per cleanout cycle (A x C):	18
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: *	**1.50565**
G.	Tons cake/crust produced per flock (B x E/1000):	22
H.	Tons cake/crust produced per cycle (G x D)	389
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):	2,927
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):	2,538
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):	635
L	Tons of litter + cake/crust produced per year (I/A)	732

* 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 litter + cake/crust removed this year (P + S)
2024	0	635	**40**	254	4	86	22	276
2025	445	1,080	**40**	432	5	108	28	460
2026	728	1,362	**40**	545	4	86	22	567
2027	882	1,516	**100**	1,516	5	108	22	1,538
				2,747	18	389	94	2,841

*** 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.

ANIMAL WASTE QUANTITY ESTIMATE

Name:	Alan Eck	County	Queen Anne's
Address:		Watershed	
City, State, Zip:		Tract / Farm:	T6188
Phone:		Livestock Type(s):	Swine Spring and Summer

Manure Production Period:

Starting date:	1/1/2025
Ending date:	7/9/2025

=> A. Total Days: 190

LIVESTOCK INFORMATION

		1	2	3	4	5	6	7	8
B.	Animal description:	Hogs 1							
C.	Weight (lbs.):	150							
D.	# of animals:	1200							
E.	Animal units [(C x D)/1000]	180	0	0	0	0	0	0	0
F.	Full days confined:	190							
G.	Partial days confined: days:	0							
	hours confined per day :	0							
	(days x hrs/day) /24 = Partial days confined:	0	0	0	0	0	0	0	0
H.	Total days confined (F + G):	190	0	0	0	0	0	0	0
I.	Fraction of collected manure, collected as liquid waste:	0							
J.	Total days unconfined (on pasture, feedlot etc.) A - H:	0	0	0	0	0	0	0	0
K.	Bedding type:	Straw	Straw	Straw	Straw	Straw	Straw		
L.	Cu. ft. of bedding this production period:	16000							
M.	Lbs. bedding/cu.ft. (see reverse side):	2.5							
N.	Tons bedding [(L x M)/2000]	20	0	0	0	0	0	0	0
O.	Fraction of bedding collected with liquid waste:	0	0	0					

Hog 1- are on farm during spring and summer until they meet market weight of 300lbs, the weight used is the average weight thoughout the growing period on the farm.

UNCOLLECTED MANURE

P.	Lbs. manure/AU/day (see reverse side):	63.4									
Q.	Tons manure on pasture, feedlot, etc. (E x J x P)/2000:	0	0	0	0	0	0	0	0	=>	Total tons of uncollected manure: (add Q1...Q8) 0

SOLID WASTE QUANTITY COLLECTED

R.	Tons manure collected (E x [H - (H x I)] x P)/2000:	1,084	0	0	0	0	0	0	0		
S.	Tons of solid waste collected [(N - (N x O)) + R]:	1,104	0	0	0	0	0	0	0	=>	Total tons solid waste collected(add S1...S8): 1,104

LIQUID WASTE QUANTITY COLLECTED

T.	Cu.ft. manure/AU/day (see reverse side):										
U.	Cu. ft. manure (E x [H x I] x T):	0	0	0	0	0	0	0	0		
V	Cu. ft. of waste [(0.5(L x O)) + U]:	0	0	0	0	0	0	0	0	=>	W. Total Cu. ft. of waste collected: (add V1...V8) 0

X.	Gallons of waste collected (W x 7.481):	0
Y.	Gallons of washwater per day: x # days:	0
Z.	Gallons of rainfall collected: (Collection area sq.ft: x in. rain: x 7.481/12):	0
	Total gallons of liquid waste collected (X +Y + Z):	0

SUMMARY - QUANTITY OF ANIMAL WASTE COLLECTED

Date	Collected waste amount		Amount used in NMP		Surplus waste	
	Tons	Gallons	Tons	Gallons	Tons	Gallons
	1,104	0	1,104		0	0

Tons of Uncollected Manure deposited on Pasture, Feedlots, etc: 0

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POULTRY LITTER QUANTITY ESTIMATE

Name: **MAE VUE** Tract / Farm: **6188 Site 1** Date: **1/1/2025**

Houses included: **6** **Bird type:** **Roaster**

Average Bird Market Weight (lbs): **4**

A.	Years between total cleanouts: Yr. next total cleanout:	**2027**
	- Yr. last total cleanout:	**2024**
	= Years in cleanout cycle:	3
B.	Total # of birds per flock (for all houses on this cleanout cycle):	**188,000**
C.	Flocks per year	**4.5**
D.	Number of flocks per cleanout cycle (A x C):	13
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: *	**0.9005**
G.	Tons cake/crust produced per flock (B x E/1000):	38
H.	Tons cake/crust produced per cycle (G x D)	489
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):	2,201
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):	1,712
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):	571
L	Tons of litter + cake/crust produced per year (I/A)	734

* 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 litter + cake/crust removed this year (P + S)
2025	0	571	**60**	342	4	150	144	486
2026	235	805	**60**	483	5	188	180	663
2027	330	901	**100**	901	4	150	100	1,001
				1,726	13	489	424	2,150

*** 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.

ANIMAL WASTE QUANTITY ESTIMATE

Name: **Alan Eck**
Address:
City, State, Zip:
Phone:

County: **Queen Anne's**
Watershed:
Tract / Farm: **T6188**
Livestock Type(s): **Swine fall and winter**

Manure Production Period: Starting date: **7/10/2025** Ending date: **12/31/2025** => **A.** Total Days: 175

LIVESTOCK INFORMATION

		1	2	3	4	5	6	7	8
B.	Animal description:	**Hogs 2**							
C.	Weight (lbs.):	**150**							
D.	# of animals:	**1200**							
E.	Animal units [(C x D)/1000]	180	0	0	0	0	0	0	0
F.	Full days confined:	**175**							
G.	Partial days confined: days:	**0**							
	hours confined per day :	**0**							
	(days x hrs/day) /24 = Partial days confined:	0	0	0	0	0	0	0	0
H.	Total days confined (F + G):	175	0	0	0	0	0	0	0
I.	Fraction of collected manure, collected as liquid waste:	**0**							
J.	Total days unconfined (on pasture, feedlot etc.) A - H:	0	0	0	0	0	0	0	0
K.	Bedding type:	**Straw**	**Straw**	**Straw**	**Straw**	**Straw**	**Straw**		
L.	Cu. ft. of bedding this production period:	**16000**							
M.	Lbs. bedding/cu.ft. (see reverse side):	**2.5**							
N.	Tons bedding [(L x M)/2000]	20	0	0	0	0	0	0	0
O.	Fraction of bedding collected with liquid waste:	**0**	**0**	**0**					

Hog 2- are on farm during fall and winter until they meet market weight of 300lbs, the weight used is the average weight thoughout the growing period on the farm.

UNCOLLECTED MANURE

P.	Lbs. manure/AU/day (see reverse side):	**63.4**									
Q.	Tons manure on pasture, feedlot, etc. (E x J x P)/2000:	0	0	0	0	0	0	0	0	=>	Total tons of uncollected manure: (add Q1...Q8) 0

SOLID WASTE QUANTITY COLLECTED

R.	Tons manure collected (E x [H - (H x I)] x P)/2000:	999	0	0	0	0	0	0	0		
S.	Tons of solid waste collected [(N - (N x O)) + R]:	1,019	0	0	0	0	0	0	0	=>	Total tons solid waste collected(add S1...S8): 1,019

LIQUID WASTE QUANTITY COLLECTED

T.	Cu.ft. manure/AU/day (see reverse side):										
U.	Cu. ft. manure (E x [H x I] x T):	0	0	0	0	0	0	0	0		
V	Cu. ft. of waste [(0.5(L x O)) + U]:	0	0	0	0	0	0	0	0	=>	W. Total Cu. ft. of waste collected: (add V1...V8) 0

X.	Gallons of waste collected (W x 7.481):	0
Y.	Gallons of washwater per day: ____ x # days: ____	0
Z.	Gallons of rainfall collected: (Collection area sq.ft: ____ x in. rain: ____ x 7.481/12):	0
	Total gallons of liquid waste collected (X +Y + Z):	0

SUMMARY - QUANTITY OF ANIMAL WASTE COLLECTED

Date	Collected waste amount		Amount used in NMP		Surplus waste	
	Tons	Gallons	Tons	Gallons	Tons	Gallons
	1,019	0	**1,019**		0	0

Tons of Uncollected Manure deposited on Pasture, Feedlots, etc: 0

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Solutions in your community

POULTRY LITTER QUANTITY ESTIMATE

Name: **Alan Eck** Tract / Farm: **Alan Eck Farm** Date: **3/1/2025**

Houses included: **3** **Bird type:** **Roaster**

Average Bird Market Weight (lbs): **8.5**

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):	**82,500**
C.	Flocks per year	**4.5**
D.	Number of flocks per cleanout cycle (A x C):	22
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: *	**1.67855**
G.	Tons cake/crust produced per flock (B x E/1000):	17
H.	Tons cake/crust produced per cycle (G x D)	363
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):	3,047
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):	2,684
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):	537
L	Tons of litter + cake/crust produced per year (I/A)	609

* 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 litter + cake/crust removed this year (P + S)
2023	0	537	**40**	215	4	66	22	237
2024	366	903	**40**	361	5	83	28	389
2025	596	1,133	**40**	453	4	66	22	475
2026	724	1,260	**40**	504	5	83	28	532
2027	811	1,347	**100**	1,347	4	66	22	1,369
				2,881	22	363	122	3,003

*** 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.

Soils Information
&
Analysis of Results

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Alan Eck			Plan Year	2025
	1	2	5		
Account ID	[redacted]	[redacted]	[redacted]		
County	Queen Anne's	Queen Anne's	Queen Anne's		
Tract or Farm ID	Alan Eck 966	Alan Eck 966	Alan Eck 966		
Field ID	1	2	5 behind barn		
MUSYM	PiB	LO	HvA		
Area | Crop	45.00 Acres | 2	64.50 Acres | 2	8.00 Acres | 16		
Organics	Pltr, Int +L |	CmpC/N<25 |	Pltr, Int +L |		
R Factor					
Adj. K Factor | LS Factor					
C | P Factors					
RUSLE A	0.60	0.36	0.60		
Transport Risk Factors					
SED Value	2	2	2		
Soil Permeability Class	Moderately Slow	Moderate	Moderate		
Field slope | Concave? | SR Factor	2.00 | No | 5.6	1.00 | No | 5.6	2.00 | No | 5.6		
Soil Drainage Class	moderately well	very poorly	poorly		
HSG | Artificial Drainage? | SD Factor	C | No | 0.0	B/D | No | 0.0	A/D | No | 0.0		
Management Factors					
Distance to Water (DF)	100-199 ft | 0.8	100-199 ft | 0.8	< 100 ft | 1.0		
Buffer Width & Type (BF)	> 35' veg. | 0.9	> 35' veg. | 0.9	> 50' veg. | 0.8		
Soil Test P Fertility Index Value	177	252	176		
Degree of P Saturation (DPS M3)	47.2 (est.)	60.0 (est.)	47.0 (est.)		
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0		
Org. P appl. rates, lb/A | OP * PSC	| 77 | - | - | 39	| 73 | - | - | 37	| - | - | - | 0		
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00		
Runoff Org. P appl. methods | AMr(o)	| M3 | - | - | 0.60	| M3 | - | - | 0.60	| - | - | - | 0.00		
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00		
Subsurface Org. P appl. methods | AMsub(o)	| M3 | - | - | 0.64	| M3 | - | - | 0.64	| - | - | - | 0.00		
P particulate | P runoff | P subsurface	26 | 47 | 0 |	36 | 57 | 0 |	28 | 42 | 0 |		
P Loss Rating Score	73 (M)	94 (M)	70 (M)		

Alan Eck (1,2,3,5) - Tract #252

QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

KATIE STARR
AG RESOURCE CONSERVATION SPECIALIST

Conservation Plan

ALAN ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

THIS IS A CROP FARM LOCATED IN QUEEN ANNE'S COUNTY, MARYLAND. THIS FARM IS IN AG LAND PRESERVATION (MALPF).

Crop

Tract: 252

Conservation Crop Rotation(328)

Grow crops in a planned rotation to protect the soil from erosion; help control weeds, insects, and diseases; and improve the physical condition of the soil. Noxious weeds (Johnsongrass, shattercane, Canada thistle, plumeless thistle, musk thistle, bull thistle) must be controlled as required by State Law and not allowed to go to seed. Use the following rotation on these fields: corn, small grain cover or commodity crop, soybeans.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	45.95 ac	12	2017	45.95 ac	12/21/2017
2	64.52 ac	12	2017	64.52 ac	12/21/2017
4	2.3 ac	12	2017	2.3 ac	12/21/2017
5	7.89 ac	12	2017	7.89 ac	12/21/2017
6	6.1 ac	12	2017	6.1 ac	12/21/2017
Total:	126.76 ac			126.76 ac	

Integrated Pest Management(595)

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production when economically viable. All chemicals shall be applied in accordance with the manufacturer's recommendations on the label and Maryland state law. Noxious weeds shall be controlled in accordance with state law and include Johnsongrass, shattercane, and Canada, bull, plumeless, and musk thistles. The Cooperative Extension Service (410-758-0166) can provide technical assistance.

Field	Planned Amount	Month	Year	Applied Amount	Date
3	4.8 ac	5	2009	4.8 ac	10/1/2009
Total:	4.8 ac			4.8 ac	

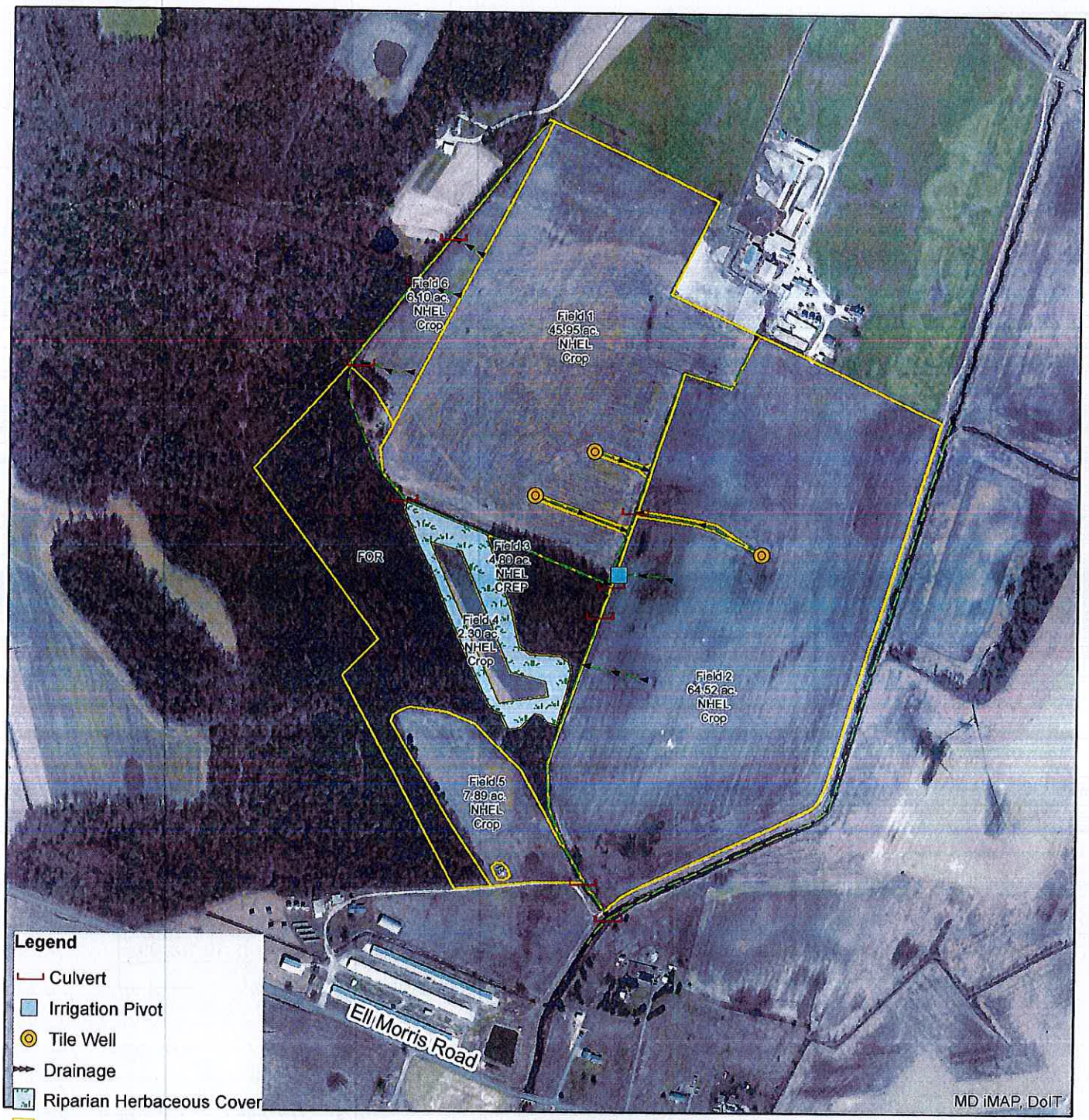
Conservation Plan Map

Owner/Operator: ALAN ECK

Farm 966
Tract 252

Total Acres: 160
Cropland Acres: 131.56

Queen Anne's Soil Conservation District
410-758-1671 X3
Assisted by: Katie Starr
Date: 1/16/2018



Legend

- Culvert
- Irrigation Pivot
- Tile Well
- Drainage
- Riparian Herbaceous Cover
- Property/Field boundary

Prepared with assistance from USDA-Natural Resources Conservation Service

USDA

660 0 660 1,320 Feet

N

Nutrient Management(590)
Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. As part of the planting of the cool season grass buffer, it is recommend to apply lime to achieve a soil pH of at least 6.0 if legumes are included in a planting, and at least 5.5 if only grasses are used. When feasible, use slow-release forms of nitrogen to provide nitrogen over a longer period of time, and to reduce nitrogen leaching and runoff.

Field	Planned Amount	Month	Year	Applied Amount	Date
3	4.8 ac	5	2009	4.8 ac	10/1/2009
Total:	4.8 ac			4.8 ac	

Nutrient Management(590)
Manage the amount, form, placement and timing of plant nutrient application. The Water Quality Improvement Act of 1998 requires farmers in Maryland to develop and implement a nutrient management plan by specific deadlines over the next several years. Farmers using chemical fertilizers are required to update their nitrogen and phosphorous-based plan to MDA requirements. The Cooperative Extension Service (410-758-0166) can provide technical assistance with developing a Nutrient Manage Plan. The Nutrient Management Plan for this farm is currently written by David Kann of AET.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	45.95 ac	12	2017	45.95 ac	12/21/2017
2	64.52 ac	12	2017	64.52 ac	12/21/2017
4	2.3 ac	12	2017	2.3 ac	12/21/2017
5	7.89 ac	12	2017	7.89 ac	12/21/2017
6	6.1 ac	12	2017	6.1 ac	12/21/2017
Total:	126.76 ac			126.76 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.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	45.95 ac	12	2017	45.95 ac	12/21/2017
2	64.52 ac	12	2017	64.52 ac	12/21/2017
4	2.3 ac	12	2017	2.3 ac	12/21/2017
5	7.89 ac	12	2017	7.89 ac	12/21/2017
6	6.1 ac	12	2017	6.1 ac	12/21/2017
Total:	126.76 ac			126.76 ac	

Riparian Herbaceous Cover(390)

These field(s) are being re-enrolled in the Conservation Reserve Enhancement Program, CREP as a Riparian Herbaceous Cover (CP21). The purpose of a Riparian Herbaceous Cover is to remove nutrients, sediment, organic matter, pesticides, and other pollutants from surface and subsurface flow. Riparian Herbaceous Cover strips reduce pollution and protect surface and subsurface water quality while enhancing the ecosystem of the water body through the processes of deposition, absorption, plant uptake, and denitrification. These field(s) will not be disturbed (i.e. mowing, disking, etc.) during the primary nesting season which is April 15 through August 15. CRP fields will be maintained for the life of the contract. See the attached Practice Implementation and Maintenance Schedule for establishment and management of this practice. All noxious weeds must be controlled prior to planting and after establishment. Note: Flagging of the practice is the responsibility of the participant. Following certification by the USDA Farm Service Agency (FSA) of the practice's boundary, it is highly recommended permanent markers will be installed by CRP/CREP participants at the participant's expense. This 100' wide buffer will be maintained to the following cool season grass mix: Orchardgrass, Red Fescue, Alsike, and White Clover. This contract will remain in effect for 10 years. Contract expires 9/30/2019.

Field	Planned Amount	Month	Year	Applied Amount	Date
3	4.8 ac	10	2009	4.8 ac	10/11/2000
Total:	4.8 ac			4.8 ac	

Upland Wildlife Habitat Management(645)

Create, maintain, or enhance areas to provide upland wildlife food and cover. Once this cover is established it will not be disturbed (i.e. mowing, disking, etc.) during the primary nesting season, April 15 through August 15. See the attached Wildlife Habitat Management Job Sheet.

Field	Planned Amount	Month	Year	Applied Amount	Date
3	4.8 ac	5	2009	4.8 ac	10/1/2009
Total:	4.8 ac			4.8 ac	

CERTIFICATION OF PARTICIPANTS

ALAN ECK 2/14/18 DATE

CERTIFICATION OF:

DISTRICT CONSERVATIONIST

NANCY METCALF 2/15/18 DATE

CONSERVATION DISTRICT

QUEEN ANNE'S SCD February 15, 2018 DATE

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).

Soils Map

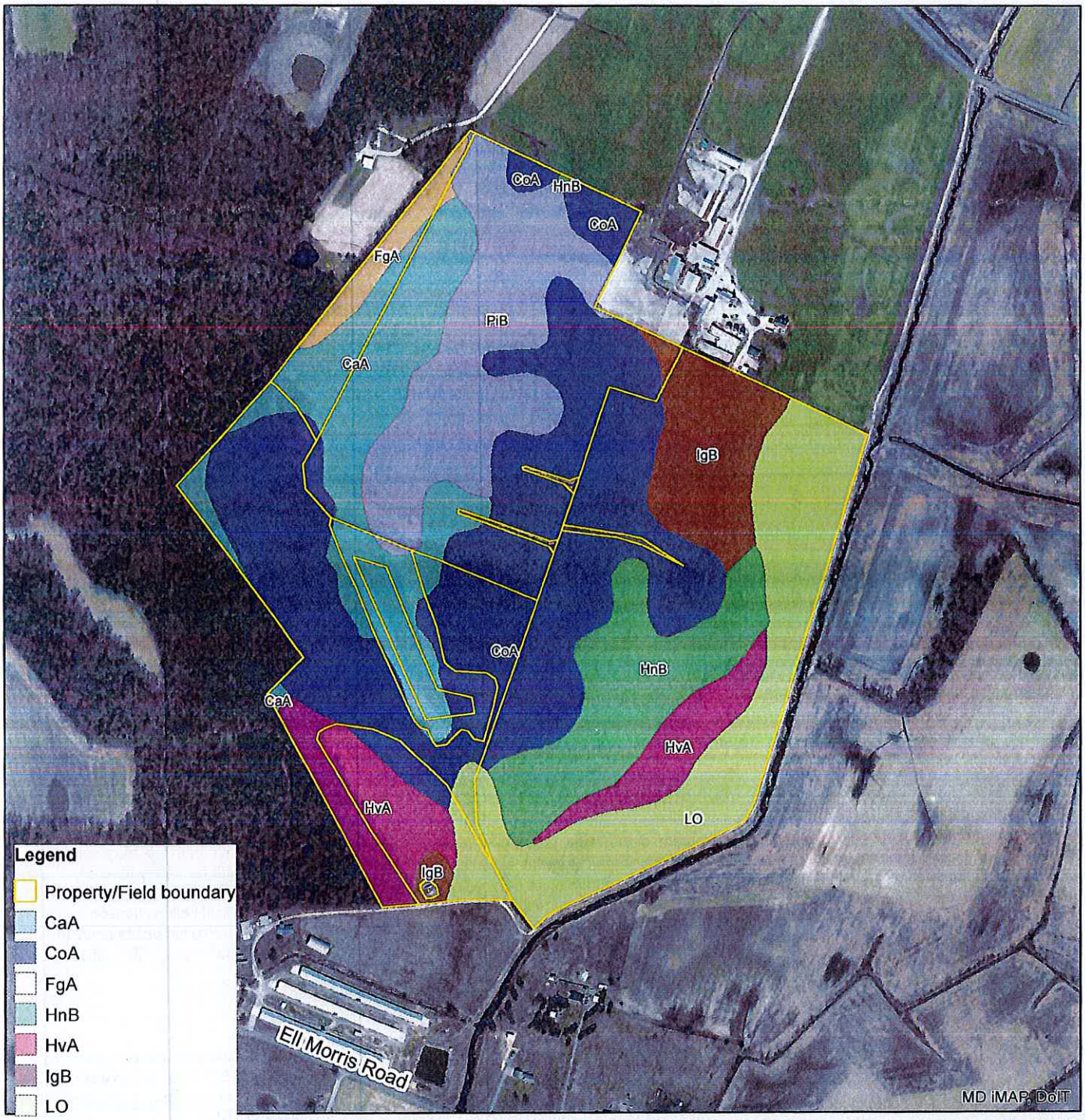
Owner/Operator: ALAN ECK

Farm 966
Tract 252

Total Acres: 160
Cropland Acres: 131.56

Queen Anne's Soil Conservation District
410-758-1671 X3
Assisted by: Katie Starr

Date: 1/16/2018



Legend

- Property/Field boundary
- CaA
- CoA
- FgA
- HnB
- HvA
- IgB
- LO
- PiB

Prepared with assistance from USDA-Natural Resources Conservation Service

USDA

660 0 660 1,320 Feet

N

Map Unit Description

Queen Anne's County, Maryland

[Minor map unit components are excluded from this report]

Map unit: CaA - Carmichael loam, 0 to 2 percent slopes

Component: Carmichael, drained (45%)

The Carmichael, drained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Carmichael, undrained (35%)

The Carmichael, undrained component makes up 35 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: CoA - Corsica mucky loam, 0 to 2 percent slopes

Component: Corsica, undrained (55%)

The Corsica, undrained component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on broad depressions, flats, uplands. The parent material consists of loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April. Organic matter content in the surface horizon is about 38 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Corsica, drained (25%)

The Corsica, drained component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 5 inches during January, February, March. Organic matter content in the surface horizon is about 9 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Map unit: FgA - Fallsington loam, 0 to 2 percent slopes

Component: Fallsington, drained (45%)

The Fallsington, drained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Fallsington, undrained (35%)

The Fallsington, undrained component makes up 35 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent.

Map Unit Description

Queen Anne's County, Maryland

Map unit: FgA - Fallsington loam, 0 to 2 percent slopes

Component: Fallsington, undrained (35%)

Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: HnB - Hammonton sandy loam, 2 to 5 percent slopes

Component: Hammonton (80%)

The Hammonton component makes up 80 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands, depressions. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: HvA - Hurlock sandy loam, 0 to 2 percent slopes

Component: Hurlock, drained (42%)

The Hurlock, drained component makes up 42 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of Loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Hurlock, undrained (38%)

The Hurlock, undrained component makes up 38 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of Loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: IgB - Ingleside sandy loam, 2 to 5 percent slopes

Component: Ingleside (75%)

The Ingleside component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: LO - Longmarsh and Indiantown soils, frequently flooded

Component: Longmarsh (43%)

The Longmarsh component makes up 43 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, coastal plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map Unit Description

Queen Anne's County, Maryland

Map unit: LO - Longmarsh and Indiantown soils, frequently flooded

Component: Indiantown (37%)

The Indiantown component makes up 37 percent of the map unit. Slopes are 0 to 1 percent. This component is on coastal plains, flood plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: PiB - Pineyneck silt loam, 2 to 5 percent slopes

Component: Pineyneck (75%)

The Pineyneck component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Soils Inventory Report

DANIEL FERRELL

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
252	1	HnB	Hammonton sandy loam, 2 to 5 percent slopes	0.1	0%
252	1	FgA	Fallsington loam, 0 to 2 percent slopes	0.1	0%
252	1	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0.4	1%
252	1	CaA	Carmichael loam, 0 to 2 percent slopes	10.2	22%
252	1	CoA	Corsica mucky loam, 0 to 2 percent slopes	15.6	34%
252	1	PiB	Pineyneck silt loam, 2 to 5 percent slopes	19.6	43%
			Total:	46	100%
252	2	HvA	Hurlock sandy loam, 0 to 2 percent slopes	5	8%
252	2	IgB	Ingleside sandy loam, 2 to 5 percent slopes	9.1	14%
252	2	HnB	Hammonton sandy loam, 2 to 5 percent slopes	14.2	22%
252	2	CoA	Corsica mucky loam, 0 to 2 percent slopes	15.5	24%
252	2	LO	Longmarsh and Indiantown soils, frequently flooded	20.7	32%
			Total:	64.5	100%
252	3	PiB	Pineyneck silt loam, 2 to 5 percent slopes	0.1	2%
252	3	CoA	Corsica mucky loam, 0 to 2 percent slopes	1.7	36%
252	3	CaA	Carmichael loam, 0 to 2 percent slopes	2.9	62%
			Total:	4.7	100%
252	4	CoA	Corsica mucky loam, 0 to 2 percent slopes	0.3	13%
252	4	CaA	Carmichael loam, 0 to 2 percent slopes	2	87%
			Total:	2.3	100%
252	5	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0.7	9%
252	5	CoA	Corsica mucky loam, 0 to 2 percent slopes	1.2	15%
252	5	LO	Longmarsh and Indiantown soils, frequently flooded	1.5	19%
252	5	HvA	Hurlock sandy loam, 0 to 2 percent slopes	4.5	57%
			Total:	7.9	100%
252	6	CoA	Corsica mucky loam, 0 to 2 percent slopes	0.1	2%
252	6	PiB	Pineyneck silt loam, 2 to 5 percent slopes	0.1	2%

252	6	FgA	Fallsington loam, 0 to 2 percent slopes	2.4	39%
252	6	CaA	Carmichael loam, 0 to 2 percent slopes	3.6	58%
			Total:	6.2	100%

252	FOR	PiB	Pineyneck silt loam, 2 to 5 percent slopes	0	0%
252	FOR	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0	0%
252	FOR	LO	Longmarsh and Indiantown soils, frequently flooded	0.6	2%
252	FOR	CaA	Carmichael loam, 0 to 2 percent slopes	2.9	11%
252	FOR	HvA	Hurlock sandy loam, 0 to 2 percent slopes	3.2	12%
252	FOR	CoA	Corsica mucky loam, 0 to 2 percent slopes	19.6	75%
			Total:	26.3	100%

Total: 157.9 100%

Elevator 2, 21, 4(middle), 5(left) - Tract # 6846

QUEEN ANNE'S COUNTY SERVICE CENTER
215 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

Conservation Plan

ELEVATOR RD LLC
C/O ALAN ECK
1437 BRIDGETOWN RD
HENDERSON, MD 21640

OBJECTIVE(S)

To maintain a profitable grain farm while conserving natural resources.

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: 6846

Conservation Crop Rotation (328)

Crop Rotation - Plan a sequence of crops grown on the same ground over a period of time to maintain or increase soil health, organic matter content, reduce erosion losses and reduce water quality degradation.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	96.5 Ac	05	2023	96.5 Ac	5/14/2023
21	30.7 Ac	05	2023	30.7 Ac	5/14/2023
4	20.2 Ac	05	2023	20.2 Ac	5/14/2023
5	71.8 Ac	05	2023	71.8 Ac	5/14/2023
Total:	219.2 Ac	--	--	219.2 Ac	--

Nutrient Management (590)

NM Level 4 - Apply nutrients based on right source, rate, time, and place (4Rs) not to exceed Land Grant University nutrient recommendations, optimizing all 4Rs for mitigating site-specific risk for nutrient loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	96.5 Ac	03	2023	96.5 Ac	3/14/2023
21	30.7 Ac	03	2023	30.7 Ac	3/14/2023
4	20.2 Ac	03	2023	20.2 Ac	3/14/2023
5	71.8 Ac	03	2023	71.8 Ac	3/14/2023
Total:	219.2 Ac	--	--	219.2 Ac	--

Conservation Plan Map

Date: 1/8/2024

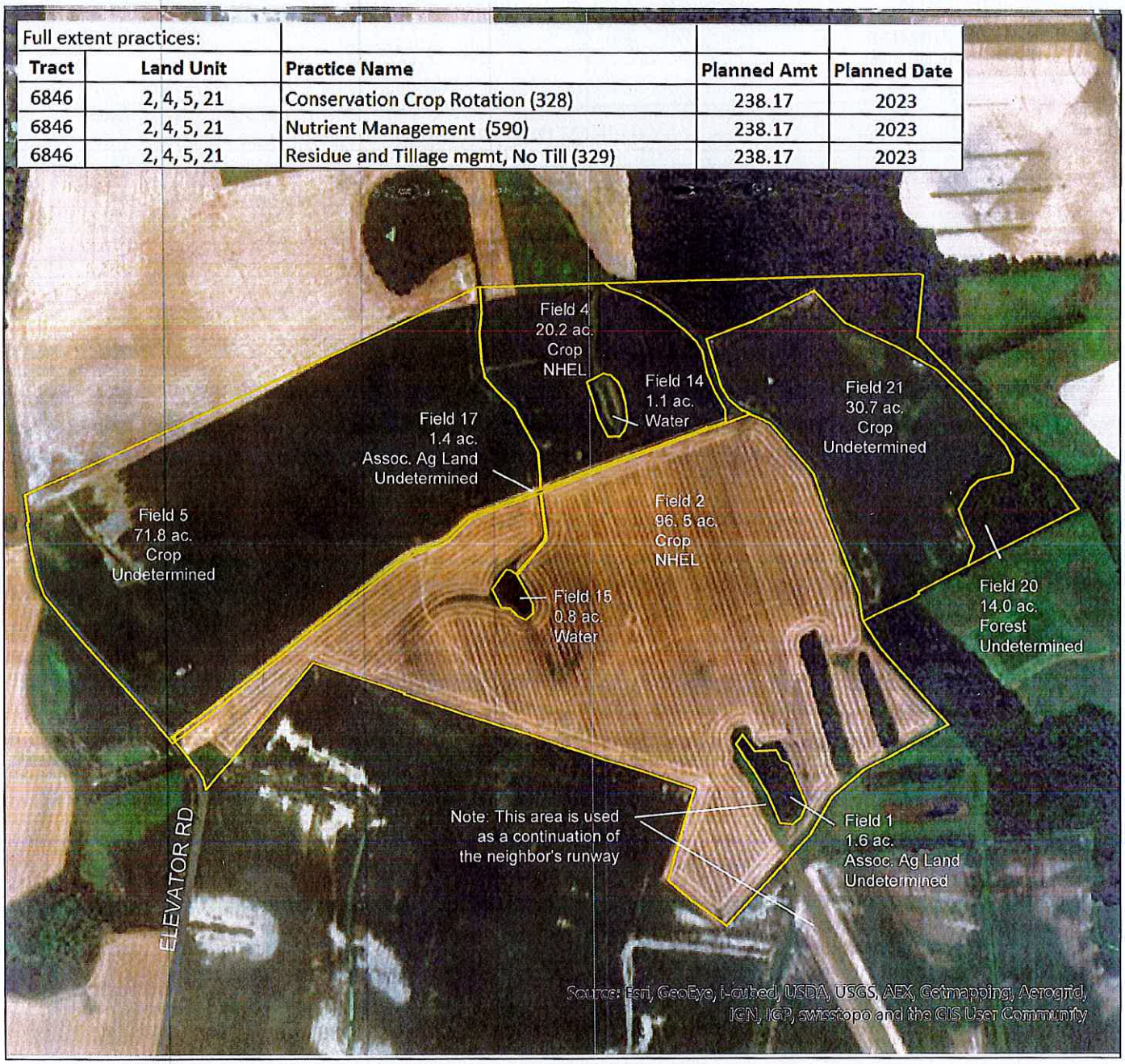
Client(s): ELEVATOR ROAD LLC
Location: FARM 1895 TRACT 6846
Queen Anne's County, Maryland
Approximate Acres: 240.42

Assisted By: ROBIN HANWAY
MDA
QUEEN ANNE'S COUNTY SERVICE CENTER
QUEEN ANNE'S SCD

Land Units: Tract 6846, Fields 11,14,15,17,2,20,21,4,5

Full extent practices:

Tract	Land Unit	Practice Name	Planned Amt	Planned Date
6846	2, 4, 5, 21	Conservation Crop Rotation (328)	238.17	2023
6846	2, 4, 5, 21	Nutrient Management (590)	238.17	2023
6846	2, 4, 5, 21	Residue and Tillage mgmt, No Till (329)	238.17	2023



Prepared with assistance from USDA-Natural Resources Conservation Service

0 770
Feet

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Practice Schedule
PLUs

USDA

Residue and Tillage Management, No Till (329)

No-till - Minimize soil disturbance by limiting tillage to only planting and manage the amount, orientation and distribution of all residues to provide cover on the soil surface throughout the year.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	96.5 Ac	04	2023	96.5 Ac	4/21/2023
21	30.7 Ac	04	2023	30.7 Ac	4/21/2023
4	20.2 Ac	04	2023	20.2 Ac	4/21/2023
5	71.8 Ac	04	2023	71.8 Ac	4/21/2023
Total:	219.2 Ac	--	--	199.0 Ac	--

CERTIFICATION OF PARTICIPANTS

ALAN ECK, ELEVATOR RD LLC — 1/10/24 DATE

CERTIFICATION OF:

PLANNER — 1/10/2024 DATE

CONSERVATION DISTRICT

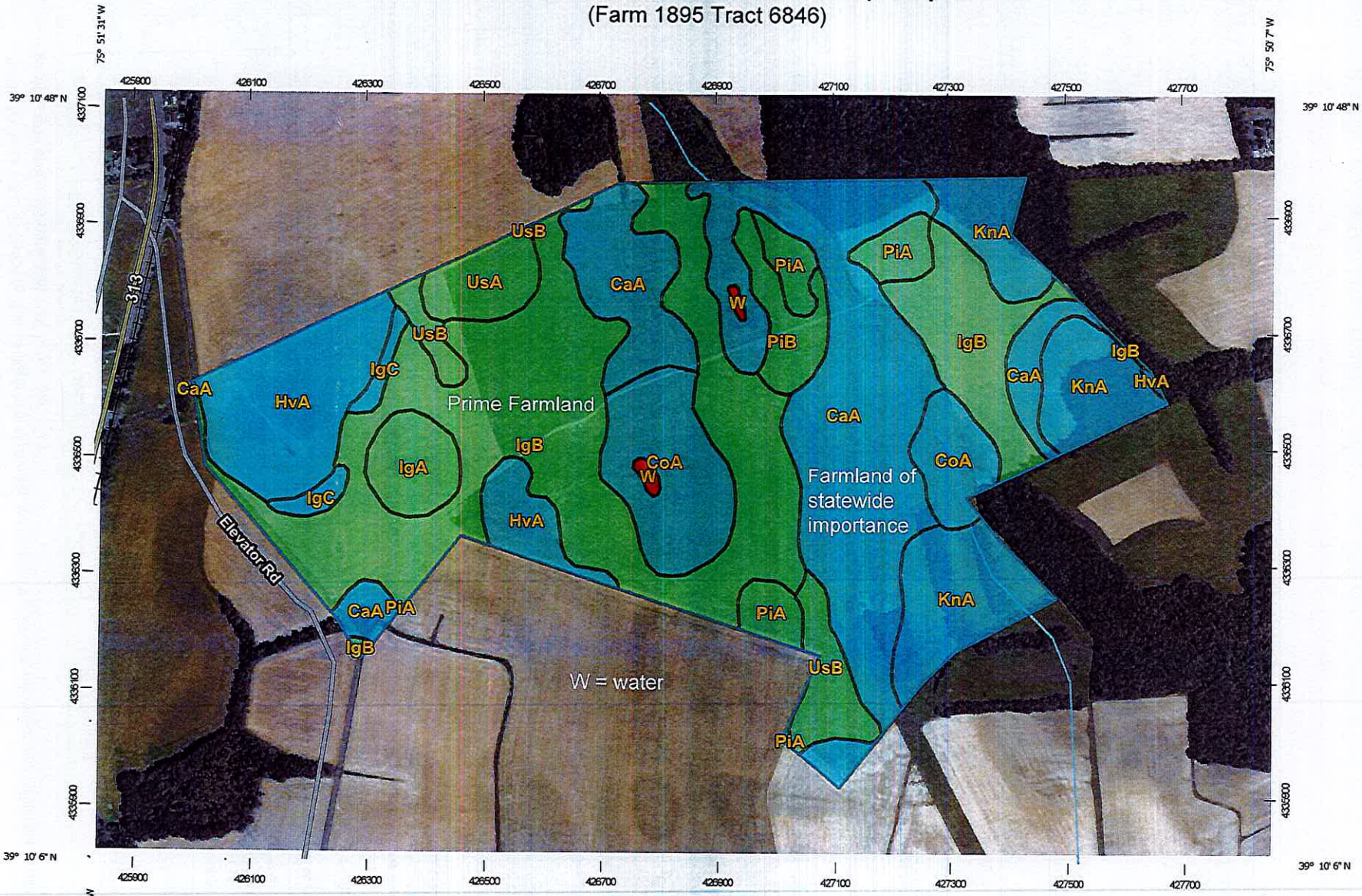
QUEEN ANNE'S SCD — 1/10/2024 DATE

USDA/NRCS

Nancy S Metcalf — 1/10/2024 DATE

DISTRICT CONSERVATIONIST

Prime farmland Map—Queen Anne's County, Maryland
(Farm 1895 Tract 6846)



Map Scale: 1:9,200 if printed on A landscape (11" x 8.5") sheet.

N

0 100 200 400 600 Meters

0 400 800 1600 2400 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

All areas prime farmland

Farmland of statewide importance

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/14/2023

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	10	CaA	Carmichael loam, 0 to 2 percent slopes	0.1	7%
6846	10	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	1.3	93%
			Total	**1.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	11	CaA	Carmichael loam, 0 to 2 percent slopes	1.0	63%
6846	11	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	0.6	38%
			Total	**1.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	14	CaA	Carmichael loam, 0 to 2 percent slopes	0.8	80%
6846	14	W	Water	0.2	20%
			Total	**1.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	15	CoA	Corsica mucky loam, 0 to 2 percent slopes	0.4	50%
6846	15	W	Water	0.4	50%
			Total	**0.8**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	16	HvA	Hurlock sandy loam, 0 to 2 percent slopes	9.0	76%
6846	16	IgB	Ingleside sandy loam, 2 to 5 percent slopes	2.7	23%
6846	16	IgC	Ingleside sandy loam, 5 to 10 percent slopes	0.1	1%
6846	16	UsB	Unicorn-Sassafras loams, 2 to 5 percent slopes	0.0	0%
			Total	**11.8**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	17	CaA	Carmichael loam, 0 to 2 percent slopes	0.1	8%
6846	17	CoA	Corsica mucky loam, 0 to 2 percent slopes	0.2	15%
6846	17	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.1	8%
6846	17	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0.8	62%
6846	17	PiB	Pineyneck silt loam, 2 to 5 percent slopes	0.1	8%
			Total	**1.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	19	CaA	Carmichael loam, 0 to 2 percent slopes	2.0	38%
6846	19	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0.5	10%
6846	19	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	0.2	4%
6846	19	PiA	Pineyneck silt loam, 0 to 2 percent slopes	2.5	48%
			Total	**5.2**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	2	CaA	Carmichael loam, 0 to 2 percent slopes	30.8	32%
6846	2	CoA	Corsica mucky loam, 0 to 2 percent slopes	16.1	17%
6846	2	HvA	Hurlock sandy loam, 0 to 2 percent slopes	4.8	5%
6846	2	IgB	Ingleside sandy loam, 2 to 5 percent slopes	25.9	27%
6846	2	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	8.7	9%
6846	2	PiA	Pineyneck silt loam, 0 to 2 percent slopes	2.6	3%
6846	2	PiB	Pineyneck silt loam, 2 to 5 percent slopes	2.2	2%
6846	2	UsB	Unicorn-Sassafras loams, 2 to 5 percent slopes	5.6	6%
			Total	**96.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	20	CaA	Carmichael loam, 0 to 2 percent slopes	5.1	36%
6846	20	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.3	2%
6846	20	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0.5	4%
6846	20	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	8.1	58%
			Total	**14.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	21	CaA	Carmichael loam, 0 to 2 percent slopes	4.6	18%
6846	21	CoA	Corsica mucky loam, 0 to 2 percent slopes	2.4	9%
6846	21	IgB	Ingleside sandy loam, 2 to 5 percent slopes	12.2	48%
6846	21	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	5.8	23%
6846	21	PiA	Pineyneck silt loam, 0 to 2 percent slopes	0.3	1%
			Total	**25.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	2B	CaA	Carmichael loam, 0 to 2 percent slopes	0.0	0%
			Total	**0.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	5	CaA	Carmichael loam, 0 to 2 percent slopes	6.8	11%
6846	5	CoA	Corsica mucky loam, 0 to 2 percent slopes	0.6	1%
6846	5	HvA	Hurlock sandy loam, 0 to 2 percent slopes	8.2	14%
6846	5	IgA	Ingleside sandy loam, 0 to 2 percent slopes	5.6	9%
6846	5	IgB	Ingleside sandy loam, 2 to 5 percent slopes	29.2	49%
6846	5	IgC	Ingleside sandy loam, 5 to 10 percent slopes	2.3	4%
6846	5	USA	Unicorn-Sassafras loams, 0 to 2 percent slopes	5.1	9%
6846	5	UsB	Unicorn-Sassafras loams, 2 to 5 percent slopes	2.0	3%
			Total	**59.8**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	6	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	0.7	100%
			Total	**0.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	7	CoA	Corsica mucky loam, 0 to 2 percent slopes	0.0	0%
6846	7	IgB	Ingleside sandy loam, 2 to 5 percent slopes	0.0	0%
			Total	**0.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6846	9	KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	0.1	100%
			Total	**0.1**	**100%**
			Grand Total	**219.7**	**100%**

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CaA	Carmichael loam, 0 to 2 percent slopes	Farmland of statewide importance	62.4	25.8%
CoA	Corsica mucky loam, 0 to 2 percent slopes	Farmland of statewide importance	19.7	8.1%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	Farmland of statewide importance	22.3	9.2%
IgA	Ingleside sandy loam, 0 to 2 percent slopes	All areas are prime farmland	5.6	2.3%
IgB	Ingleside sandy loam, 2 to 5 percent slopes	All areas are prime farmland	76.7	31.6%
IgC	Ingleside sandy loam, 5 to 10 percent slopes	Farmland of statewide importance	2.5	1.0%
KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	Farmland of statewide importance	25.8	10.6%
PiA	Pineyneck silt loam, 0 to 2 percent slopes	All areas are prime farmland	7.9	3.3%
PiB	Pineyneck silt loam, 2 to 5 percent slopes	All areas are prime farmland	5.4	2.2%
UsA	Unicorn-Sassafras loams, 0 to 2 percent slopes	All areas are prime farmland	5.6	2.3%
UsB	Unicorn-Sassafras loams, 2 to 5 percent slopes	All areas are prime farmland	7.8	3.2%
W	Water	Not prime farmland	0.6	0.3%
Totals for Area of Interest			**242.3**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaA	Carmichael loam, 0 to 2 percent slopes	62.4	25.8%
CoA	Corsica mucky loam, 0 to 2 percent slopes	19.7	8.1%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	22.3	9.2%
IgA	Ingleside sandy loam, 0 to 2 percent slopes	5.6	2.3%
IgB	Ingleside sandy loam, 2 to 5 percent slopes	76.7	31.6%
IgC	Ingleside sandy loam, 5 to 10 percent slopes	2.5	1.0%
KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	25.8	10.6%
PiA	Pineyneck silt loam, 0 to 2 percent slopes	7.9	3.3%
PiB	Pineyneck silt loam, 2 to 5 percent slopes	5.4	2.2%
UsA	Unicorn-Sassafras loams, 0 to 2 percent slopes	5.6	2.3%
UsB	Unicorn-Sassafras loams, 2 to 5 percent slopes	7.8	3.2%
W	Water	0.6	0.3%
Totals for Area of Interest		**242.3**	**100.0%**

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: Field 4 **File:** Plan: Profile (Temp. scenario[1]) of Elevator Rd LLC T6846 **Access Group:** R2_NRCS_Fld_Office

Inputs:

Location	Soil	Slope length (horiz)	Avg. slope steepness, %
USA\Maryland\Queen Annes County	Queen Anne's County, Maryland\IgB Ingleside sandy loam, 2 to 5 percent slopes\Ingleside sandy loam 75%	170	2.0

R Factor	Annual precip	10-yr 24-hr rainfall	In Req area?
180	42.6	5.3	No

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Corn, grain	bushels	275.00
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Wheat, winter 7in rows	bushels	80.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Soybean, southern 15-20 in rows	Bushels	55.000

Contouring	Strips/barriers	Diversion/terrace, sediment basin	Subsurface drainage	Adjust res. burial level	General yield level	Rock cover, %
b. absolute row grade 0.3 percent	(none)	(none)	(none)	Normal res. burial	Management set yield	0

Outputs:

T value	Soil loss erod. portion	Detachment on slope	Soil loss for cons. plan	Sediment delivery	Net C factor	Net K factor	Crit. slope length	Surf. cover after planting, %
5.0	0.078	0.078	0.078	0.078	0.019	0.15	170	

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/10/0	Manure spreader, solid and semi-solid		92
4/15/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	88
10/15/0	Harvest, killing crop 50pct standing stubble		96
11/20/0	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	97
6/4/1	Harvest, killing crop 50pct standing stubble		97
6/6/1	Drill or air seeder single disk openers 7-10 in spac.	Soybean, southern 15-20 in rows	97
11/27/1	Harvest, killing crop 50pct standing stubble		97

SCI and STIR Output

Soil conditioning index (SCI)	SCI OM subfactor	SCI FO subfactor	SCI ER subfactor	Avg. annual slope STIR	Wind & irrigation-induced erosion for SCI, t/ac/yr
1.03	1.2	0.94	0.97	6.34	0

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: Field 21 **File:** Plan: Profile (Temp. scenario[1]) of Elevator Rd LLC T6846 **Access Group:** R2_NRCS_Fld_Office

Inputs:

Location	Soil	Slope length (horiz)	Avg. slope steepness, %
USA\Maryland\Queen Annes County	Queen Anne's County, Maryland\IgB Ingleside sandy loam, 2 to 5 percent slopes\Ingleside sandy loam 75%	170	2.0

R Factor	Annual precip	10-yr 24-hr rainfall	In Req area?
180	42.6	5.3	No

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Corn, grain	bushels	275.00
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Wheat, winter 7in rows	bushels	80.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Soybean, southern 15-20 in rows	Bushels	55.000

Contouring	Strips/barriers	Diversion/terrace, sediment basin	Subsurface drainage	Adjust res. burial level	General yield level	Rock cover, %
b. absolute row grade 0.3 percent	(none)	(none)	(none)	Normal res. burial	Management set yield	0

Outputs:

T value	Soil loss erod. portion	Detachment on slope	Soil loss for cons. plan	Sediment delivery	Net C factor	Net K factor	Crit. slope length	Surf. cover after planting, %
5.0	0.078	0.078	0.078	0.078	0.019	0.15	170	

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/10/0	Manure spreader, solid and semi-solid		92
4/15/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	88
10/15/0	Harvest, killing crop 50pct standing stubble		96
11/20/0	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	97
6/4/1	Harvest, killing crop 50pct standing stubble		97
6/6/1	Drill or air seeder single disk openers 7-10 in spac.	Soybean, southern 15-20 in rows	97
11/27/1	Harvest, killing crop 50pct standing stubble		97

FUEL USE EVALUATION:

Fuel type for entire run	Equiv. diesel use for entire simulation	Energy use for entire simulation	Fuel cost for entire simulation, US$/ac
(none)	7.1	990000	0

SCI and STIR Output

Soil conditioning index (SCI)	SCI OM subfactor	SCI FO subfactor	SCI ER subfactor	Avg. annual slope STIR	Wind & irrigation-induced erosion for SCI, t/ac/yr
1.03	1.2	0.94	0.97	6.34	0

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: Field 2 **File:** Plan: Profile (Temp. scenario[1]) of Elevator Rd LLC T6846 **Access Group:** R2_NRCS_Fld_Office

Inputs:

Location	Soil	Slope length (horiz)	Avg. slope steepness, %
USA\Maryland\Queen Annes County	Queen Anne's County, Maryland\CaA Carmichael loam, 0 to 2 percent slopes\Carmichael loam drained 45%	170	2.0

R Factor	Annual precip	10-yr 24-hr rainfall	In Req area?
180	42.6	5.3	No

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Corn, grain	bushels	275.00
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Wheat, winter 7in rows	bushels	80.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Soybean, southern 15-20 in rows	Bushels	55.000

Contouring	Strips/barriers	Diversion/terrace, sediment basin	Subsurface drainage	Adjust res. burial level	General yield level	Rock cover, %
b. absolute row grade 0.3 percent	(none)	(none)	(none)	Normal res. burial	Management set yield	0

Outputs:

T value	Soil loss erod. portion	Detachment on slope	Soil loss for cons. plan	Sediment delivery	Net C factor	Net K factor	Crit. slope length	Surf. cover after planting, %
5.0	0.26	0.26	0.26	0.26	0.019	0.42	170	

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/10/0	Manure spreader, solid and semi-solid		92
4/15/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	88
10/15/0	Harvest, killing crop 50pct standing stubble		96
11/20/0	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	97
6/4/1	Harvest, killing crop 50pct standing stubble		97
6/6/1	Drill or air seeder single disk openers 7-10 in spac.	Soybean, southern 15-20 in rows	97
11/27/1	Harvest, killing crop 50pct standing stubble		97

FUEL USE EVALUATION:

Fuel type for entire run	Equiv. diesel use for entire simulation	Energy use for entire simulation	Fuel cost for entire simulation, US$/ac
(none)	7.0	960000	0

SCI and STIR Output

Soil conditioning index (SCI)	SCI OM subfactor	SCI FO subfactor	SCI ER subfactor	Avg. annual slope STIR	Wind & irrigation-induced erosion for SCI, t/ac/yr
1.02	1.2	0.94	0.90	6.34	0

The **SCI** is the **Soil Conditioning Index** rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The **STIR** value is the **Soil Tillage Intensity Rating**. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

Maeve - Tract #6188

USDA
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

NANCY METCALF
DISTRICT CONSERVATIONIST

Conservation Plan

MARK A ECK
450 ELL MORRIS RD
HENDERSON, MD 21640

Associated Ag Land

Conservation Crop Rotation(328)

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter.

Tract: 6188 Fields 19 2.1 ac

Planned Amount	Month	Year	Applied Amount	Date
2.1 ac	5	2017		

Cover Crop(340)

Close-growing grasses, legumes, or small grain will be grown for seasonal protection, soil improvement and nutrient management.

Tract: 6188 Fields 19 2.1 ac

Planned Amount	Month	Year	Applied Amount	Date
2.1 ac	5	2017		

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application.

Tract: 6188 Fields 19, 21 2.3 ac

Planned Amount	Month	Year	Applied Amount	Date
2.3 ac	5	2017		

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application. The Water Quality Improvement Act of 1998 requires farmers in Maryland to develop and implement a nutrient management plan by specific deadlines over the next several years. Farmers using chemical fertilizers are required to update their nitrogen and phosphorous-based plan to MDA requirements. The Cooperative Extension Service (410-758-0166) can provide technical assistance with developing a Nutrient Manage Plan.

Tract: 6188 Fields 4 0.6 ac

Planned Amount	Month	Year	Applied Amount	Date
0.6 ac	5	2017		

Residue and Tillage Management, Reduced Till(345)

Manage amount, orientation and distribution of organic residue so maximum amounts are left on the soil surface by using mulch tillage techniques and implements such as chisels, sweeps and harrows.

Tract: 6188 Fields 19 2.1 ac

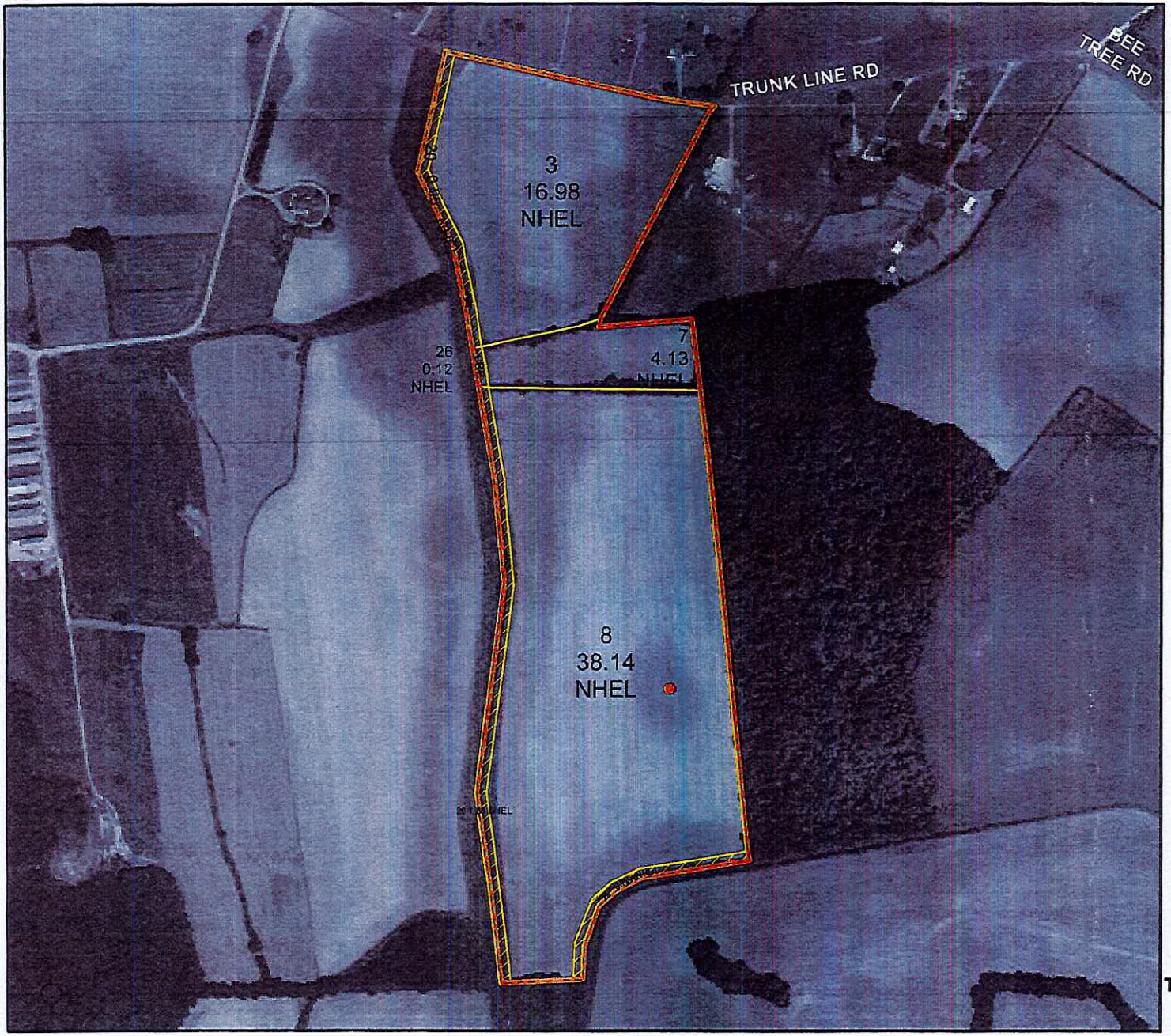
Planned Amount	Month	Year	Applied Amount	Date
2.1 ac	5	2017		

USDA United States Department of Agriculture

Queen Anne's County, Maryland

Farm 1117

Tract 7495



2025 Program Year

Map Created February 26, 2025

0 250 500 1,000 Feet

Producer Shares:

Irrigated / Nonirrigated

Common Land Unit

- Cropland
- CRP
- Tract Boundary

Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 62.90 acres

Conservation Plan Map

Owner: Mark Eck
Operator: Mark Eck
Total Acres: 259.4
Crop Acres:235.1
Farm 1117
Tract ~~6188~~ 7497 & 7495

Queen Anne's Conservation District
(410) 758 - 1380
Assisted by: Chris Cochran
Date: 5/25/2017

Prepared with assistance from USDA-Natural Resources Conservation Service

Legend

Mark_Eck_T6188

990 0 990 1,980 2,970 Feet

N

-75.850295 39.085111 Decimal Degrees

All Fields Are NHEL

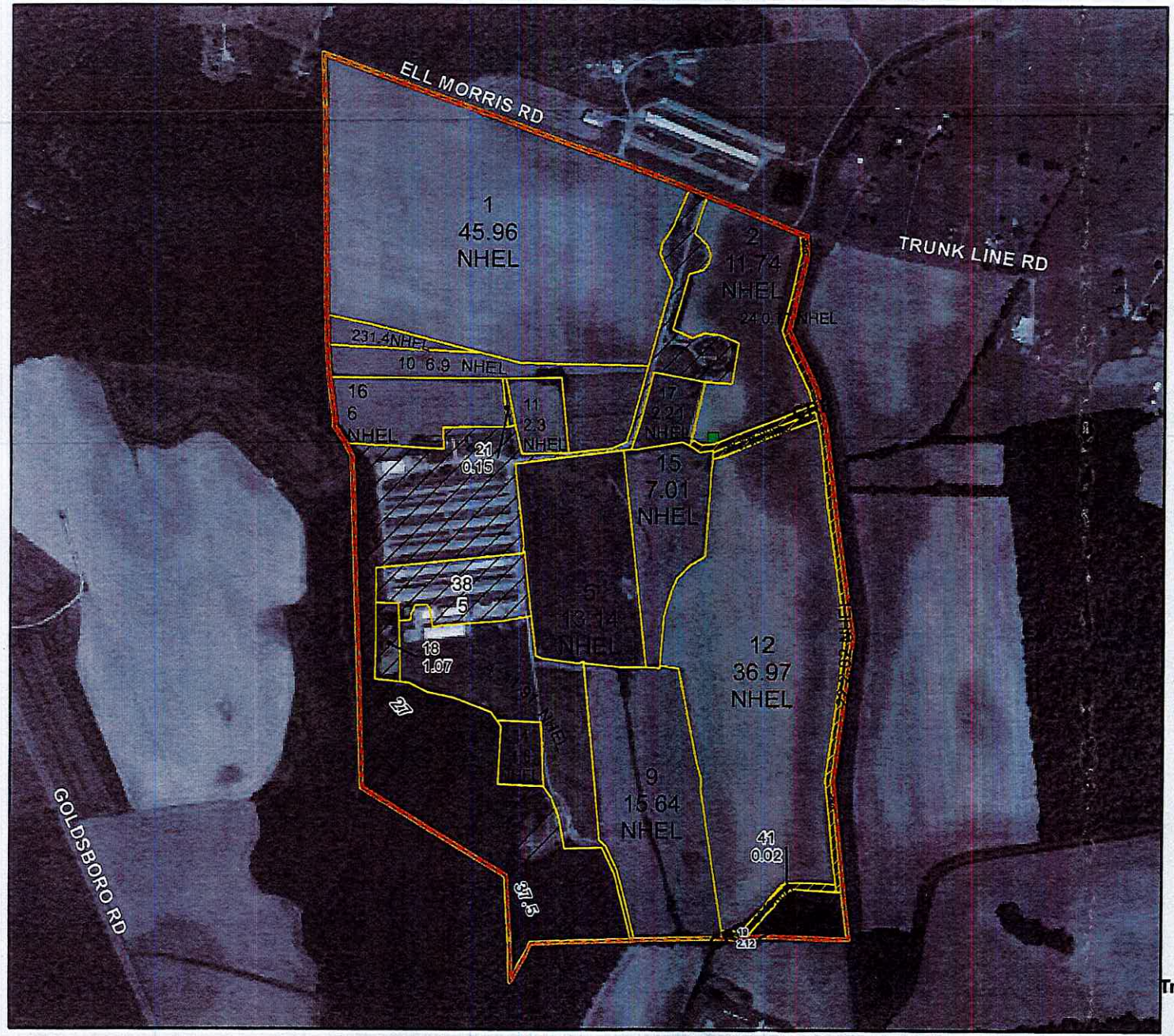
USDA

USDA United States Department of Agriculture

Queen Anne's County, Maryland

Farm 1117

Tract 7497



2025 Program Year

Map Created February 26, 2025

0 335 670 1,340 Feet

Producer Shares:

Irrigated / Nonirrigated

Common Land Unit

- Non-Cropland
- Cropland
- CRP
- Tract Boundary

Wetland Determination Identifiers

- Restricted Use
- Limited Restrictions
- Exempt from Conservation Compliance Provisions

Tract Cropland Total: 167.14 acres

Structure for Water Control(587)
A water control structure will be installed to control the elevation of water in drainage ditches and in adjacent structures (tile) that use the drainage ditch as an outlet. Its important to manage water levels during field planting and harvesting times and at other times as management conditions dictate. See the NRCS design for structural details and management techniques. This practice will improve water quality by trapping sediments and allowing denitrification from the water surface.

Tract: 6188 Fields 19 2.1 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	1	2015		

Crop

Animal Mortality Facility(316)
Install an on-farm facility for the treatment or disposal of livestock and poultry carcasses.

Tract: 6188 Fields 9 16.3 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	10	2017	1no	9/24/18

Conservation Crop Rotation(328)
Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Corn, Barley

Tract: 6188 Fields 1, 2, 3, 6, 7, 8, 22 155.4 ac

Planned Amount	Month	Year	Applied Amount	Date
155.4 ac	5	2017		

Cover Crop(340)
Close-growing grasses, legumes, or small grain will be grown for seasonal protection, soil improvement and nutrient management.

Tract: 6188 Fields 1, 2, 3, 6, 7, 8, 22 155.4 ac

Planned Amount	Month	Year	Applied Amount	Date
155.4 ac	5	2017		

Grade Stabilization Structure(410)

Grade control structure(s) will be installed to prevent further erosion caused by excessive grade. Technical assistance will be provided by NRCS. Once constructed, the area needs to be kept in vigorous vegetative cover. Mow to control woody vegetation, outside of the primary nesting season. Lime and fertilize periodically. Keep pipe inlet(s) and/or stone free of debris. Keep filter covered with stone.

Tract: 6188 Fields 6 36.5 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	11	2014	1. no	10/31/2016
1. no	11	2017	1. no	6/7/2018

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application. The Water Quality Improvement Act of 1998 requires farmers in Maryland to develop and implement a nutrient management plan by specific deadlines over the next several years. Farmers using chemical fertilizers are required to update their nitrogen and phosphorous-based plan to MDA requirements. The Cooperative Extension Service (410-758-0166) can provide technical assistance with developing a Nutrient Manage Plan.

Tract: 6188 Fields 1, 2, 3, 5, 6, 7, 8, 9, 14, 20, 22, 24, 26, 28, 29, 30, 31 192 ac

Planned	Applied

Amount	Month	Year	Amount	Date
192. ac	5	2017		

Residue and Tillage Management, Reduced Till(345)
Manage amount, orientation and distribution of organic residue so maximum amounts are left on the soil surface by using mulch tillage techniques and implements such as chisels, sweeps and harrows.
Tract: 6188 Fields 1, 2, 3, 6, 7, 8, 22 155.4 ac

Planned Amount	Month	Year	Applied Amount	Date
155.4 ac	5	2017		

Structure for Water Control(587)
A water control structure will be installed to control the elevation of water in drainage ditches and in adjacent structures (tile) that use the drainage ditch as an outlet. Its important to manage water levels during field planting and harvesting times and at other times as management conditions dictate. See the NRCS design for structural details and management techniques. This practice will improve water quality by trapping sediments and allowing denitrification from the water surface.
Tract: 6188 Fields 22, 30 2.6 ac

Planned Amount	Month	Year	Applied Amount	Date
2. no	1	2015	2. no	11/17/2016

Waste Storage Facility(313)
Construct a manure storage structure at the location shown on the plan map. The structure will be built according to NRCS design, and operated and maintained in accordance with a Comprehensive Nutrient Management Plan or a Waste Management System plan developed for this operation. All necessary permits and notifications will be obtained before construction.
Tract: 6188 Fields 9 16.3 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	10	2017	1 no	9/24/18

Farmstead
Agricultural Energy Management Plan - Written(128)

Obtain an Agricultural Energy Management Plan that addresses the energy resource concerns on the farm operating enterprise and meets the "type 2 Audit" minimum criteria established in the ANSI/ASABE S612 (July2009) Performing On-Farm Energy Audits standard. This CAP (conservation activity plan) will be developed by a certified TSP (Technical Service Provider) and contracted through EQIP.

Tract: 6188 Fields HQ1 11.2 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	4	2018		

Animal Mortality Facility(316)
Install an on-farm facility for the treatment or disposal of livestock and poultry carcasses.
Tract: 6188 Fields HQ1 11.2 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	1	1990	1. no	1/3/1994

Heavy Use Area Protection(561)

Construct a Heavy Use Area (HUA) at the load-out doors of the poultry house. 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. A sign, provided by NRCS, will be posted so that 0&M requirements are clearly understood. Follow all EQIP contract requirements.

Tract: 6188 Fields HQ 4.2 ac

Planned Amount	Month	Year	Applied Amount	Date
1. sq ft	8	2015	14350 SF	1/26/16

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application. The Water Quality Improvement Act of 1998 requires farmers in Maryland to develop and implement a nutrient management plan by specific deadlines over the next several years. Farmers using chemical fertilizers are required to update their nitrogen and phosphorous-based plan to MDA requirements. The Cooperative Extension Service (410-758-0166) can provide technical assistance with developing a Nutrient Manage Plan.

Tract: 6188 Fields HQ, HQ1 15.4 ac

Planned Amount	Month	Year	Applied Amount	Date
15.4 ac	5	2017		

Waste Storage Facility(313)

Construct a manure storage structure at the location shown on the plan map. The structure will be built according to NRCS design, and operated and maintained in accordance with a Comprehensive Nutrient Management Plan or a Waste Management System plan developed for this operation. All necessary permits and notifications will be obtained before construction.

Tract: 6188 Fields HQ1 11.2 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	1	1987	1. no	1/3/1994

Forest

Conservation Crop Rotation(328)

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter.

Tract: 6188 Fields 27 22.2 ac

Planned Amount	Month	Year	Applied Amount	Date
22.2 ac	5	2017		

Cover Crop(340)

Close-growing grasses, legumes, or small grain will be grown for seasonal protection, soil improvement and nutrient management.

Tract: 6188 Fields 27 22.2 ac

Planned Amount	Month	Year	Applied Amount	Date
22.2 ac	5	2017		

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application.

Tract: 6188 Fields 27 22.2 ac

Planned Amount	Month	Year	Applied Amount	Date
22.2 ac	5	2017		

Residue and Tillage Management, Reduced Till(345)

Manage amount, orientation and distribution of organic residue so maximum amounts are left on the soil surface by using mulch tillage techniques and implements such as chisels, sweeps and harrows.

Tract: 6188 Fields 27 22.2 ac

Planned Amount	Month	Year	Applied Amount	Date
22.2 ac	5	2017		

Pasture

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application. The Water Quality Improvement Act of 1998 requires farmers in Maryland to develop and implement a nutrient management plan by specific deadlines over the next several years. Farmers using chemical fertilizers are required to update their nitrogen and phosphorous-based plan to MDA requirements. The Cooperative Extension Service (410-758-0166) can provide technical assistance with developing a Nutrient Manage Plan.

Tract: 6188 Fields 10, 11, 12, 13, 15, 16, 17, 23, 25 42.5 ac

Planned Amount	Month	Year	Applied Amount	Date
42.5 ac	5	2017		

Structure for Water Control(587)

A water control structure will be installed to control the elevation of water in drainage ditches and in adjacent structures (tile) that use the drainage ditch as an outlet. Its important to manage water levels during field planting and harvesting times and at other times as management conditions dictate. See the NRCS design for structural details and management techniques. This practice will improve water quality by trapping sediments and allowing denitrification from the water surface.

Tract: 6188 Fields 13 7 ac

Planned Amount	Month	Year	Applied Amount	Date
1. no	1	2015	1. no	10/31/2016

CERTIFICATION OF PARTICIPANTS

Mark A Eck 9-25-17
MARK A ECK DATE

CERTIFICATION OF:

DISTRICT CONSERVATIONIST

Nancy S Metcalf 11/20/17
NANCY METCALF DATE

CONSERVATION DISTRICT

November 28th 2017
QUEEN ANNE'S SCD DATE

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.

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Washington, DC 20250-9410

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USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info:

File: Plan: Profile (Temp. scenario[1]) of qa_default_Katie*
Access Group: R2_NRCS_Fld_Office

Inputs:

Location	Soil	Slope length (horiz)	Avg. slope steepness, %
USA\Maryland\Queen Annes County	Queen Anne's County, Maryland\LO Longmarsh and Indiantown soils, frequently flooded\Longmarsh mucky loam 43%	100	2.0

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Corn, grain	bushels	250.00
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Barley, winter	bushels	90.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Soybean, mw 7in rows	bu	45.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Wheat, winter 7in rows	bushels	45.000

Contouring	Strips/barriers	Diversion/terrace, sediment basin	Subsurface drainage	Adjust res. burial level	General yield level	Rock cover, %
b. absolute row grade 0.3 percent	(none)	(none)	(none)	Normal res. burial	Base yield	0

Outputs:

T value	Soil loss erod. portion	Detachment on slope	Soil loss for cons. plan	Sediment delivery	Net C factor	Net K factor	Crit. slope length	Surf. cover after planting, %
3.0	0.44	0.44	0.44	0.44	0.047	0.27	100	

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/1/0	Sprayer, post emergence		79
4/10/0	Manure spreader, solid and semi-solid		78
4/11/0	Seedbed conditioner, coil tine har, rlng bskt		67
4/12/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	62
10/1/0	Harvest, killing crop 50pct standing stubble		94
10/10/0	Drill or air seeder single disk openers 7-10 in spac.	Barley, winter	97
5/1/1	Sprayer, kill crop		92
5/15/1	Drill or air seeder single disk openers 7-10 in spac.	Soybean, mw 7in rows	96
10/14/1	Harvest, killing crop 50pct standing stubble		95
10/17/1	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	96
6/19/2	Harvest, killing crop 30pct standing stubble		95

FUEL USE EVALUATION:

Fuel type for entire run	*Equiv. diesel use for entire simulation*	*Energy use for entire simulation*	*Fuel cost for entire simulation, US$/ac*
(none)	8.3	1200000	0

SCI and STIR Output

Soil conditioning index (SCI)	*SCI OM subfactor*	*SCI FO subfactor*	*SCI ER subfactor*	*Avg. annual slope STIR*	*Wind & irrigation-induced erosion for SCI, t/ac/yr*
0.790	0.66	0.90	0.83	10.1	0

The **SCI** is the **Soil Conditioning Index** rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The **STIR** value is the **Soil Tillage Intensity Rating**. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

USDA NRCS Natural Resources Conservation Service

RUSLE2 Profile Erosion Calculation Record

Info: Field 4 **File:** Plan: Profile (Temp. scenario[1]) of Elevator Rd LLC T6846 **Access Group:** R2_NRCS_Fld_Office

Inputs:

Location	*Soil*	*Slope length (horiz)*	*Avg. slope steepness, %*
USA\Maryland\Queen Annes County	Queen Anne's County, Maryland\IgB Ingleside sandy loam, 2 to 5 percent slopes\Ingleside sandy loam 75%	170	2.0

R Factor	*Annual precip*	*10-yr 24-hr rainfall*	*In Req area?*
180	42.6	5.3	No

Management	*Vegetation*	*Yield units*	*# yield units, #/ac*
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Corn, grain	bushels	275.00
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Wheat, winter 7in rows	bushels	80.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; sb, nr, nt	vegetations\Soybean, southern 15-20 in rows	Bushels	55.000

Contouring	*Strips/barriers*	*Diversion/terrace, sediment basin*	*Subsurface drainage*	*Adjust res. burial level*	*General yield level*	*Rock cover, %*
b. absolute row grade 0.3 percent	(none)	(none)	(none)	Normal res. burial	Management set yield	0

Outputs:

T value	*Soil loss erod. portion*	*Detachment on slope*	*Soil loss for cons. plan*	*Sediment delivery*	*Net C factor*	*Net K factor*	*Crit. slope length*	*Surf. cover after planting, %*
5.0	0.078	0.078	0.078	0.078	0.019	0.15	170	

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
4/10/0	Manure spreader, solid and semi-solid		92
4/15/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	88
10/15/0	Harvest, killing crop 50pct standing stubble		96
11/20/0	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	97
6/4/1	Harvest, killing crop 50pct standing stubble		97
6/6/1	Drill or air seeder single disk openers 7-10 in spac.	Soybean, southern 15-20 in rows	97
11/27/1	Harvest, killing crop 50pct standing stubble		97

SCI and STIR Output

Soil conditioning index (SCI)	*SCI OM subfactor*	*SCI FO subfactor*	*SCI ER subfactor*	*Avg. annual slope STIR*	*Wind & irrigation-induced erosion for SCI, t/ac/yr*
1.03	1.2	0.94	0.97	6.34	0

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaA	Carmichael loam, 0 to 2 percent slopes	62.4	25.8%
CoA	Corsica mucky loam, 0 to 2 percent slopes	19.7	8.1%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	22.3	9.2%
IgA	Ingleside sandy loam, 0 to 2 percent slopes	5.6	2.3%
IgB	Ingleside sandy loam, 2 to 5 percent slopes	76.7	31.6%
IgC	Ingleside sandy loam, 5 to 10 percent slopes	2.5	1.0%
KnA	Kentuck mucky silt loam, 0 to 2 percent slopes	25.8	10.6%
PiA	Pineyneck silt loam, 0 to 2 percent slopes	7.9	3.3%
PiB	Pineyneck silt loam, 2 to 5 percent slopes	5.4	2.2%
UsA	Unicorn-Sassafras loams, 0 to 2 percent slopes	5.6	2.3%
UsB	Unicorn-Sassafras loams, 2 to 5 percent slopes	7.8	3.2%
W	Water	0.6	0.3%
Totals for Area of Interest		**242.3**	**100.0%**

USDA QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

KATIE STARR
AG RESOURCE CONSERVATION SPECIALIST

Conservation Plan

ALAN ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

THIS FARM IS ENROLLED IN AG LAND PRESERVATION. THIS IS A POULTRY AND GRAIN OPERATION IN QUEEN ANNE'S COUNTY MARYLAND. AI#66799

Crop

Tract: 6077

Nutrient Management(590)

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. As part of the planting of the cool season grass buffer, it is recommend to apply lime to achieve a soil pH of at least 6.0 if legumes are included in a planting, and at least 5.5 if only grasses are used. When feasible, use slow-release forms of nitrogen to provide nitrogen over a longer period of time, and to reduce nitrogen leaching and runoff.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

Riparian Herbaceous Cover(390)

This area will be enrolled in CRP/CREP. Establish and maintain perennial herbaceous cover to protect soil and water resources and enhance wildlife habitat on land removed from agricultural production. Refer to the attached job sheet for recommended seed mixes and other planting and establishment information. Once established, do not mow during the primary nesting season of April 15 to August 15. Noxious weeds must be controlled as required by State Law. If necessary, spot treatment of noxious weeds (mowing or spraying limited to the immediate area of infestation) may be authorized by the Farm Service Agency County Office. Refer to the job sheet for additional information on routine maintenance and required mid-contract management practices. Maintain cool season grass buffers to Orchardgrass, Red Fescue, Alsike Clover, and White Clover. Strip varies between 80'-100'. This contract expires 9/30/2019.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

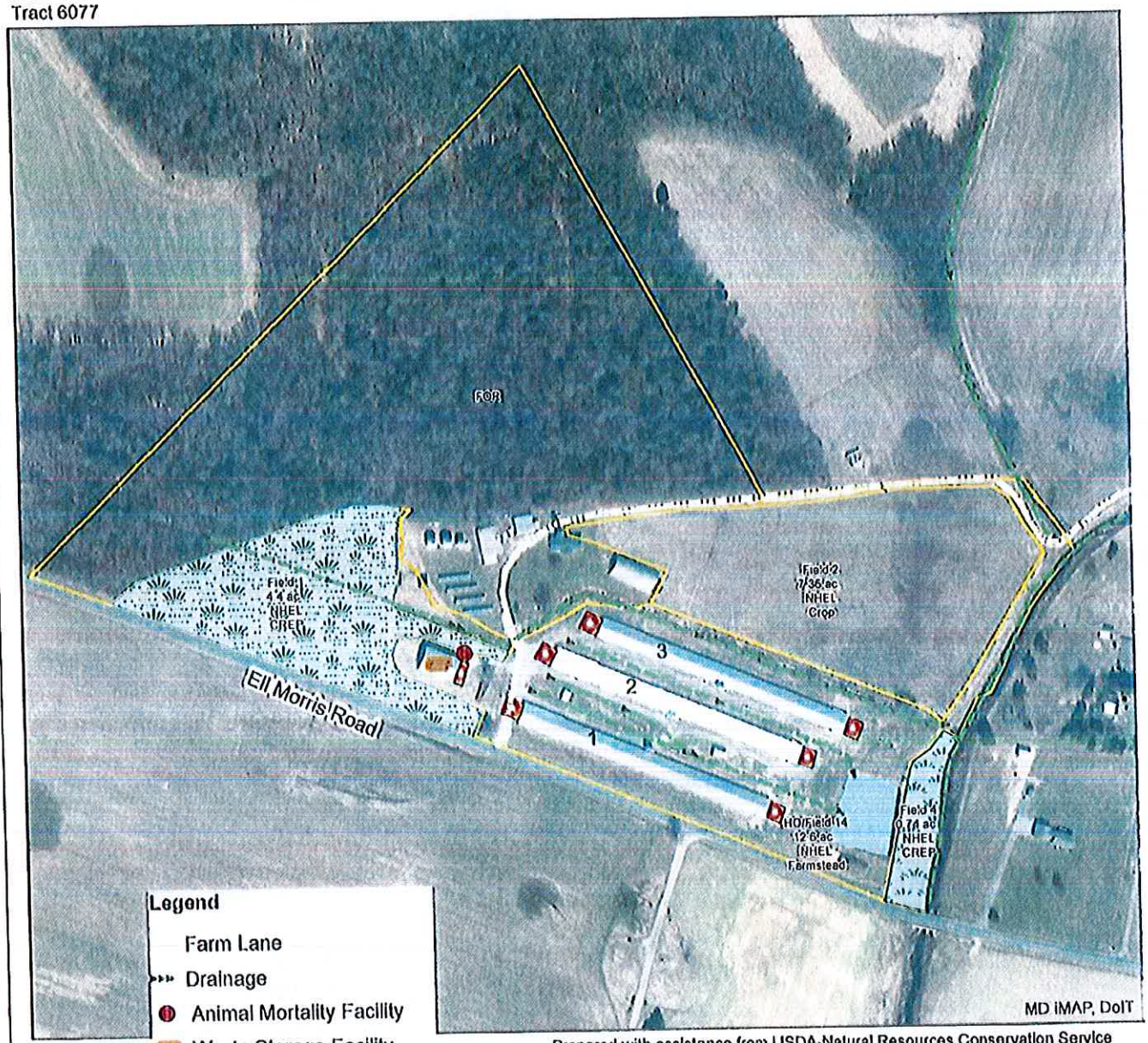
Conservation Plan Map

Date: 2/8/2018

Owner: Alan Eck
Operator: Alan Eck
Approximate Acres: 30.43
Crop Acres: 12.50

Farm 966
Tract 6077

Queen Anne's Soil Conservation District
410-758-1671 x3
Assisted By: Katie Starr



Prepared with assistance from USDA-Natural Resources Conservation Service

USDA

330 0 330 660 Feet

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Upland Wildlife Habitat Management(645)

Create, maintain, or enhance areas to provide upland wildlife food and cover. Once this cover is established it will not be disturbed (i.e. mowing, disking, etc.) during the primary nesting season, April 15 through August 15.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

Wetland Restoration(657)

This area will be enrolled in CRP/CREP. Restore and maintain a wetland at the location shown on the plan map to benefit waterfowl, wading birds, and other wildlife, and to provide other wetland functions. The design and installation of this practice will meet NRCS standards and specifications. All necessary permits and notifications will be obtained before construction. Refer to the attached job sheet for operation and maintenance information. Once established, do not mow during the primary nesting season of April 15 to August 15. Noxious weeds must be controlled as required by State Law. If necessary, spot treatment of noxious weeds (mowing or spraying limited to the immediate area of infestation) may be authorized by the Farm Service Agency County Office. This field will be maintained to Deertongue, Virginia Wild Rye, Little Bluestem, and Partridge Pea. This contract expires 9/30/21.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	4.4 ac	12	2010	4.4 ac	6/20/2011
Total:	4.4 ac			4.4 ac	

Wetland Wildlife Habitat Management(644)

This area is enrolled in the Conservation Reserve Enhancement Program, CREP, as a wetland restoration (CP23) to create or improve existing habitat for wetland wildlife, both game and non-game species. See attached job sheet for management details.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	4.4 ac	12	2010	4.4 ac	6/20/2011
Total:	4.4 ac			4.4 ac	

Conservation Crop Rotation(328)

Grow crops in a planned rotation to protect the soil from erosion; help control weeds, insects, and diseases; and improve the physical condition of the soil. Noxious weeds (Johnsongrass, shattercane, Canada thistle, plumeless thistle, musk thistle, bull thistle) must be controlled as required by State Law and not allowed to go to seed. Use the following rotation on these fields: corn grain, winter cover crop or small grain, soybeans

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.4 ac	2	2018	7.36 ac	2/9/2018
Total:	7.4 ac			7.36 ac	

Nutrient Management(590)

Manage the amount, form, placement and timing of plant nutrient application to protect surface and groundwater from runoff and/or leaching of nutrients. A Nutrient Management Plan (NMP) will be developed and followed for each crop to be grown on each field. This NMP will be developed by a consultant licensed and certified by the Maryland Department of Agriculture. The Maryland Water Quality Improvement Act of 1998 requires all nutrient management plans to address both nitrogen and phosphorus as the limiting nutrients. The NMP will account for all sources and forms of plant nutrients applied for plant growth and production. The amount of all nutrients applied must be based on a current analysis of the soil's potential to produce a realistic yield. All fields will have current soil test analysis of not more than 3 years old. Plans should be implemented as written, and updated at least every 3 years or whenever there is a major change in the farming operation. Records will be kept which document, at a minimum; crops & crop acres, animal type and number, sources of nutrients applied including pounds/tons of commercial fertilizer and/or animal manure applied and how nutrients may have been incorporated. Records will note when the crops were planted, harvested, and the yields were obtained for each individual field or management unit. The Nutrient Management Plan for this farm is written by David Kann at AET.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.4 ac	2	2018	7.36 ac	2/9/2018
Total:	7.4 ac			7.36 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.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.4 ac	2	2018	7.36 ac	2/9/2018
Total:	7.4 ac			7.36 ac	

Farmstead

Tract: 6077

Amendments for the Treatment of Agricultural Waste(591)

A crop by-product conveyance system using structures, conduits, or equipment.

Field	Planned Amount	Month	Year	Applied Amount	Date
14	230. ani unt	12	2010	230 ani unt	12/9/2010
Total:	230. ani unt			230. ani unt	

Animal Mortality Facility(316)

Construct a dead poultry composting facility according to NRCS standards and specifications at the approximate location shown on the plan map to provide for the composting of the normal daily accumulation of dead birds from the operation.

Field	Planned Amount	Month	Year	Applied Amount	Date
14	1. no	2	2020		
Total:	1. no				

Heavy Use Area Protection(561)

Construct a Heavy Use Area (HUA) at the load-out doors of the poultry house. 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. A sign, provided by NRCS, will be posted so that O&M requirements are clearly understood.

Field	Planned Amount	Month	Year	Applied Amount	Date
14	0.1 ac	12	2010		
Total:	0.1 ac				

Heavy Use Area Protection(561)

Construct a heavy use area (poultry pad) at the location(s) shown on the plan map where poultry manure and other waste products are handled. The poultry pad will protect the soil from erosion and reduce nutrient contamination of surface and groundwater. Pads will be designed and installed according to NRCS standards and specifications, and will be maintained according to the attached Operation and Maintenance plan. Follow all EQIP contract requirements.

Field	Planned Amount	Month	Year	Applied Amount	Date
14	0.6 ac	9	2011	0.6	10/5/2010
Total:	0.6 ac				

Pond(378)

Maintain existing pond. Inspect regularly for pipe blockages, especially after heavy rains. Immediately repair

Field	Planned Amount	Month	Year	Applied Amount	Date
14	1. no	1	1992	1 no	2/19/1992
Total:	1. no			1. no	

Waste Storage Facility(313)

Construct a waste storage structure according to NRCS standards and specifications at the approximate

Field	Planned Amount	Month	Year	Applied Amount	Date
14	1. no	10	2010	1 no	10/15/2010
Total:	1. no			1. no	

CERTIFICATION OF PARTICIPANTS

ALAN ECK 2/14/18 DATE

CERTIFICATION OF:

DISTRICT CONSERVATIONIST

NANCY METCALF 2/15/18 DATE

CONSERVATION DISTRICT February 15th, 2018

QUEEN ANNE'S SCD DATE

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 in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, family status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer."

Soils Map

Date: 2/9/2018

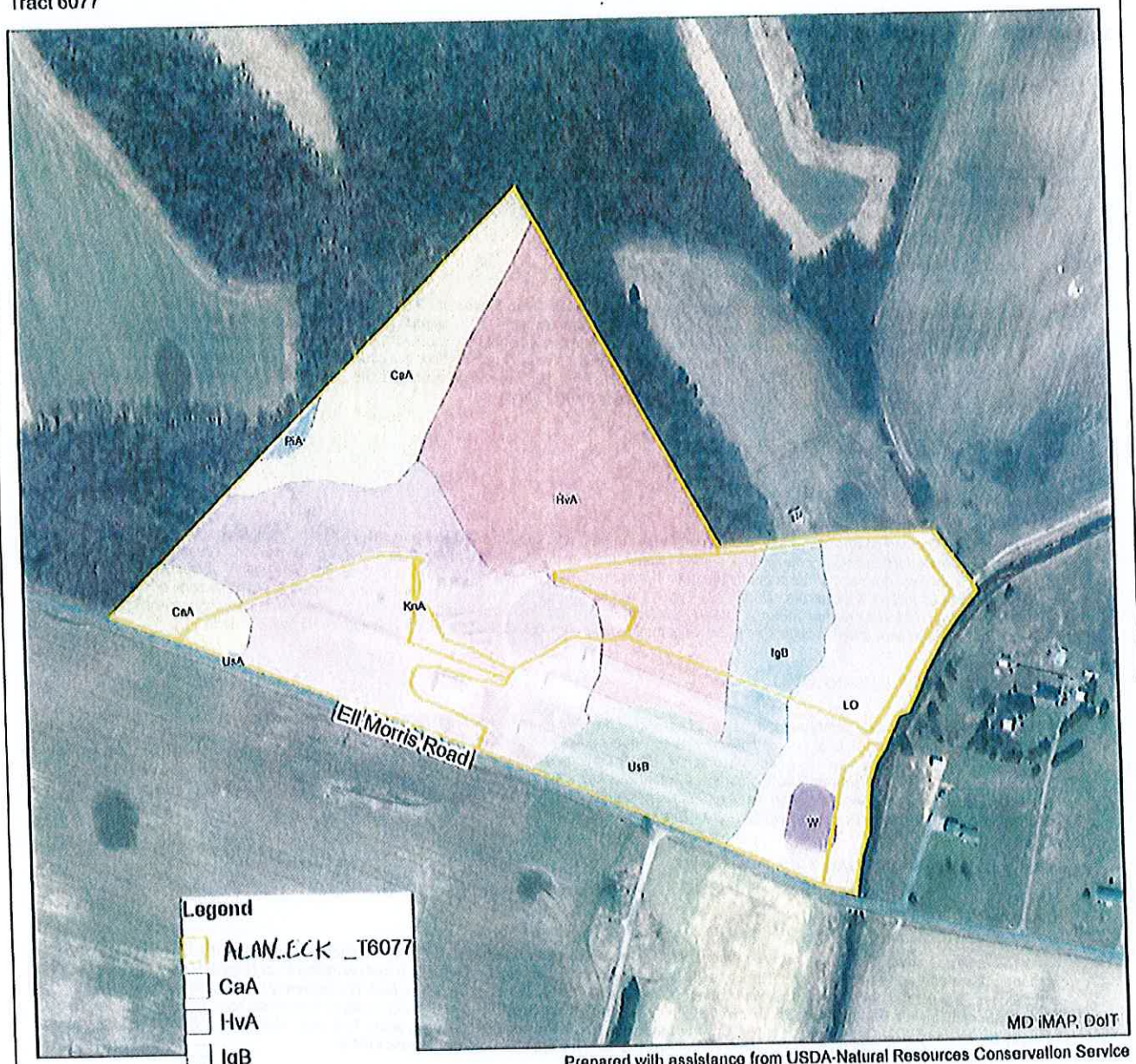
Owner: Alan Eck
Operator: Alan Eck

Approximate Acres: 30.43

Farm 966
Tract 6077

Queen Anne's Soil Conservation District
410-758-1671 x3

Assisted By: Katie Starr



Legend

- ALAN.ECK _T6077
- CaA
- HvA
- IgB
- KnA
- LO
- PiA
- UsA
- UsB
- W

Prepared with assistance from USDA-Natural Resources Conservation Service

USDA

400 0 400 800 Feet

N

Map Unit Description

Queen Anne's County, Maryland

[Minor map unit components are excluded from this report]

Map unit: CaA - Carmichael loam, 0 to 2 percent slopes

Component: Carmichael, drained (45%)

The Carmichael, drained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Carmichael, undrained (35%)

The Carmichael, undrained component makes up 35 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: HvA - Hurlock sandy loam, 0 to 2 percent slopes

Component: Hurlock, drained (42%)

The Hurlock, drained component makes up 42 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of Loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Hurlock, undrained (38%)

The Hurlock, undrained component makes up 38 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of Loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Map unit: IgB - Ingleside sandy loam, 2 to 5 percent slopes

Component: Ingleside (75%)

The Ingleside component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: KnA - Kentuck mucky silt loam, 0 to 2 percent slopes

Component: Kentuck, undrained (45%)

The Kentuck, undrained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on lowlands, depressions. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater

Map Unit Description

Queen Anne's County, Maryland

Map unit: KnA - Kentuck mucky silt loam, 0 to 2 percent slopes

Component: Kentuck, undrained (45%)

than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria.

Component: Kentuck, drained (30%)

The Kentuck, drained component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions, lowlands. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 5 inches during January, February, March. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Map unit: LO - Longmarsh and Indiantown soils, frequently flooded

Component: Longmarsh (43%)

The Longmarsh component makes up 43 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, coastal plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria.

Component: Indiantown (37%)

The Indiantown component makes up 37 percent of the map unit. Slopes are 0 to 1 percent. This component is on coastal plains, flood plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria.

Map unit: PIA - Pineyneck silt loam, 0 to 2 percent slopes

Component: Pineyneck (80%)

The Pineyneck component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Map unit: UsA - Unicorn-Sassafras loams, 0 to 2 percent slopes

Component: Unicorn (45%)

The Unicorn component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 1. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Map Unit Description

Queen Anne's County, Maryland

Map unit: UsA - Unicorn-Sassafras loams, 0 to 2 percent slopes

Component: Sassafras (35%)

The Sassafras component makes up 35 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 1. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Map unit: UsB - Unicorn-Sassafras loams, 2 to 5 percent slopes

Component: Unicorn (40%)

The Unicorn component makes up 40 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Sassafras (35%)

The Sassafras component makes up 35 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: W - Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

USDA NRCS

RUSLE2 Profile Erosion Calculation Record

Info:

File: Plan: Profile (Temp. scenario[1]) of Alan Eck T6077
Access Group: R2_NRCS_Fld_Office

Inputs:

Location	Soil	Slope length (horiz)	Avg. slope steepness, %
USA\Maryland\Queen Annes County	Queen Anne's County, Maryland\I.O Longmarsh and Indiantown soils, frequently flooded\Longmarsh mucky loam 43%	100	2.0

Management	Vegetation	Yield units	tl yield units, tl/ac
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Corn, grain	bushels	250.00
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Barley, winter	bushels	90.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Soybean, mw 7in rows	bu	45.000
managements\CMZ 59\c.Other Local Mgt Records\cg, nt; ww, fnt; dc sb, nr, nt - litter w/ turbo till-ALAN ECK	vegetations\Wheat, winter 7in rows	bushels	45.000

Contouring	Strips/barriers	Diversion/terrace, sediment basin	Subsurface drainage	Adjust res. burial level	General yield level	Rock cover, %
b. absolute row grade 0.3 percent	(none)	(none)	(none)	Normal res. burial	Base yield	0

Outputs:

T value	Soil loss erod. portion	Detachment on slope	Soil loss for cons. plan	Sediment delivery	Net C factor	Net K factor	Crit. slope length	Surf. cover after planting, %
3.0	0.44	0.44	0.44	0.44	0.047	0.27	100	

Date	Operation	Vegetation	Surf. res. cov. after op, %
4/1/0	Sprayer, post emergence		79
4/10/0	Manure spreader, solid and semi-solid		78
4/11/0	Seedbed conditioner, coil tine har, ring bskt		67
4/12/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	62
10/1/0	Harvest, killing crop 50pct standing stubble		94
10/10/0	Drill or air seeder single disk openers 7-10 in spac.	Barley, winter	97
5/1/1	Sprayer, kill crop		92
5/15/1	Drill or air seeder single disk openers 7-10 in spac.	Soybean, mw 7in rows	96
10/14/1	Harvest, killing crop 50pct standing stubble		95
10/17/1	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	96
6/19/2	Harvest, killing crop 30pct standing stubble		95

AI-66799

NRCS Natural Resources Conservation Service
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671 ext.3

Carrie Jennings
Soil Conservation Planner

Conservation Plan

ALAN ECK
450 ELL MORRIS RD
HENDERSON, MD 21640

This farm is enrolled in Agricultural Land Preservation.
Alan Eck's AI# is: ~~145651~~ 66799 CJ

CREP Field 1 used to be contract #536 and #583.

Tract: 6077

Nutrient Management

Warm-season grasses are much more tolerant of poor site conditions than most cool-season grasses. It is usually not necessary to add lime to native grass plantings, provided the soil pH is 5.0 or above. A pH of 5.5 to 6.5 is ideal for most species. Similarly, phosphorus (P2O5) and potassium (K2O) should only be applied if a soil test indicates that these nutrients are in the low range. Warm-season grasses need very little nitrogen. Do not apply any nitrogen at the time of planting because it will only

Field 1 used to be contract #536 and #583.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	4.4 ac	12	2010		
Total:	4.4 ac				

Pest Management

Manage CREP plantings to control competition and/or damage from weeds, insects or nuisance wildlife. Follow the recommendations included in the job sheet. All chemicals shall be applied in accordance with the manufacturer's recommendations on the label and Maryland state law. Noxious weeds shall be controlled in accordance with state law and include Johnsongrass, shattercane, and Canada, bull, plumeless, and musk thistles.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	4.4 ac	12	2010		
Total:	4.4 ac				

Wetland Restoration CP 23

This area will be enrolled in CRP/CREP. Restore and maintain a wetland at the location shown on the plan map to benefit waterfowl, wading birds, and other wildlife, and to provide other wetland functions. The design and installation of this practice will meet NRCS standards and specifications. All necessary permits and notifications will be obtained before construction. Refer to the attached job sheet for operation and maintenance information. Once established, do not mow during the primary nesting season of April 15 to August 15. Noxious weeds must be controlled as required by State Law. If necessary, spot treatment of noxious weeds (mowing or spraying limited to the immediate area of infestation) may be authorized by the Farm Service Agency County Office.

This field of 5.1 acres will be planted to Deertongue (*Tioga*), Virginia Wild Rye (*Common*), Little Bluestem (*Aldous*), and Partridge Pea (*Common*).

This contract will be in effect for 10 years.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	4.4 ac	12	2010		
Total:	4.4 ac				

Wetland Wildlife Habitat Management

This area is enrolled in the Conservation Reserve Enhancement Program, CREP, as a wetland restoration (CP23) to create or improve existing habitat for wetland wildlife, both game and non-game species.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	4.4 ac	12	2010		
Total:	4.4 ac				

Crop

Tract: 6077

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Typically, a 2 year rotation of conventional corn, followed by conventional wheat, followed by no-till soybeans is followed. Chicken manure is applied around April through the end of May.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.3 ac	12	2015		
Total:	7.3 ac				

Cover Crop

Small grain will be planted for seasonal protection of the soil and to utilize excess nitrogen. Avoid fall topdressing with nitrogen since tests often show no significant increase in yield.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.3 ac	12	2015		
Total:	7.3 ac				

USDA NRCS Natural Resources Conservation Service

Rusle Program Version:
Rusle Science Version:
Data Base:

RUSLE2 Erosion Calculation Record

File: plans\Daniel Ferrell T6077
Access Group: R2_NRCS_Fld_Office

Inputs:

Owner name	Location	Info
Daniel Ferrell	Maryland\Queen Annes County	FARM 966 AND TRACT 6077

Field name	Soil	Slope T Value	Slope length, ft	Slope steepness, %
2	Queen Anne's, MD\Lo Longmarsh mucky loam, 0 to 1 percent slopes\Longmarsh mucky loam 65%	5.0	100	2.0

Results:

Field name	Description	Contouring system	Support practices	Terrace/diversion system	Cons. plan. soil loss, t/ac/yr	Sed. delivery, t/ac/yr	Soil conditioning index (SCI)	STIR value	Wind & irrigation-induced erosion for SCI	Fuel cost
2	conventional corn, conventional wheat, no-till soybean	b. absolute row grade 0.3 percent	-- none --	-- none --	0.28	0.28	0.100	56	0	26.1

The **SCI** is the **Soil Conditioning Index** rating. If the calculated index is a negative value, soil organic matter levels are predicted to decline under that production system. If the index is a positive value, soil organic matter levels are predicted to increase under that system.

The **STIR** value is the **Soil Tillage Intensity Rating**. It utilizes the speed, depth, surface disturbance percent and tillage type parameters to calculate a tillage intensity rating for the system used in growing a crop or a rotation. STIR ratings tend to show the differences in the degree of soil disturbance between systems. The kind, severity and number of ground disturbing passes are evaluated for the entire cropping rotation as shown in the management description.

Nutrient Management

Manage the amount, form, placement and timing of plant nutrient application. The Water Quality Improvement Act of 1998 requires farmers in Maryland to develop and implement a nutrient management plan by specific deadlines over the next several years. Farmers using chemical fertilizers are required to update their nitrogen and phosphorous-based plan to MDA requirements. The Cooperative Extension Service (410-758-0166) can provide technical assistance with developing a Nutrient Manage Plan.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.3 ac	12	2015		
Total:	7.3 ac				

Residue Mgmt, Mulch Till

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. This refers to the no-till soybeans.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	7.3 ac	12	2015		
Total:	7.3 ac				

CRP

Tract: 6077

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. As part of the planting of the cool season grass buffer, it is recommend to apply lime to achieve a soil pH of at least 6.0 if legumes are included in a planting, and at least 5.5 if only grasses are used. When feasible, use slow-release forms of nitrogen to provide nitrogen over a longer period of time, and to reduce nitrogen leaching and runoff.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production when economically viable. All chemicals shall be applied in accordance with the manufacturer's recommendations on the label and Maryland state law. Noxious weeds shall be controlled in accordance with state law and include Johnsongrass, shattercane, and Canada, bull, plumeless, and musk thistles. The Cooperative Extension Service (410-758-0166) can provide technical assistance.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

Riparian Herbaceous Cover **Contract #1350**

This area will be enrolled in CRP/CREP. Establish and maintain perennial herbaceous cover to protect soil and water resources and enhance wildlife habitat on land removed from agricultural production. Refer to the attached job sheet for recommended seed mixes and other planting and establishment information. Once established, do not mow during the primary nesting season of April 15 to August 15. Noxious weeds must be controlled as required by State Law. If necessary, spot treatment of noxious weeds (mowing or spraying limited to the immediate area of infestation) may be authorized by the Farm Service Agency County Office. Refer to the job sheet for additional information on routine maintenance and required mid-contract management practices.

Maintain cool season grass filterstrip to Orchardgrass, Red Fescue, Alsike Clover, and White Clover. Strip varies between 80' to 100'.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

Upland Wildlife Habitat Management

Create, maintain, or enhance areas to provide upland wildlife food and cover. Once this cover is established it will not be disturbed (i.e. mowing, disking, etc.) during the primary nesting season, April 15 through August 15.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	0.7 ac	6	2009	0.7 ac	9/10/2009
Total:	0.7 ac			0.7 ac	

HEADQUARTERS

Tract: 6077

Amendments for Treatment of Ag Waste

A crop by-product conveyance system using structures, conduits, or equipment.

Field	Planned Amount	Month	Year	Applied Amount	Date
14	230 ani	12	2010	230 ani	12/9/2010
Total:	230 ani			230 ani	

Heavy Use Area Protection

A heavy use area will be established in front of poultry waste storage sheds and channel composters shown on the plan map to protect areas from erosion or other environmental deterioration caused by sustained heavy use of livestock. The area will be established according to NRCS standards and specifications

Field	Planned Amount	Month	Year	Applied Amount	Date
14	0.1 ac	12	2010		
Total:	0.1 ac				

Heavy Use Area Protection

Construct a Heavy Use Area (HUA) at the load-out doors of the poultry house. 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. A sign, provided by NRCS, will be posted so that 0&M requirements are clearly understood. Follow all EQIP contract requirements.

	Field	Planned Amount	Month	Year	Applied Amount	Date
EQIP	14	0.6 ac	9	2011	0.6 ac	10/5/2010
	Total:	0.6 ac			0.6 ac	

Pond **Pond Permit # 683**

Maintain existing pond. Inspect regularly for pipe blockages, especially after heavy rains. Immediately repair any damage or eroding areas. Mow the dam and emergency spillway at least twice annually and remove any woody growth. Lime and fertilize grass areas according to soil test results. Contact NRCS (as needed) for assistance.

Field	Planned Amount	Month	Year	Applied Amount	Date
14	1 no	1	1992	1 no	2/19/1992
Total:	1 no			1 no	

Waste Storage Facility **CR-2010-2159**

Construct a waste storage structure according to NRCS standards and specifications at the approximate location shown on the plan map to provide waste storage until it's applied to cropland or other approved lands. Follow the NRCS/Extension Service Operation (410-758-0166) and Maintenance Plan for the safe and efficient operation of the storage facility.

	Field	Planned Amount	Month	Year	Applied Amount	Date
MACS	14	1 no	10	2010	1 no	10/15/2010
	Total:	1 no			1 no	

CERTIFICATION OF PARTICIPANTS

ALAN ECK	DATE 12/30/15

CERTIFICATION OF:

Designated ~~DISTRICT~~ CONSERVATIONIST ~~NANCY METCALF~~ Sharon Culotta	DATE 2/19/16

CONSERVATION DISTRICT QUEEN ANNE'S SCD	DATE February 19th 2016

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.

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Conservation Plan Map Farm 966 Tract 6077

12/30/15

Owner/operator: Alan Eck
District: QUEEN ANNE'S SCD
Approximate Acres: 27.5

Tax Account ID: [redacted]

Assisted by: Carrie Jennings
Queen Anne's SCD
410-758-1671 ext. 3

-75.852568 39.088938 Decimal Degrees

330 0 330 660 990 1,320 Feet

N

Soils Map Farm 966 Tract 6077

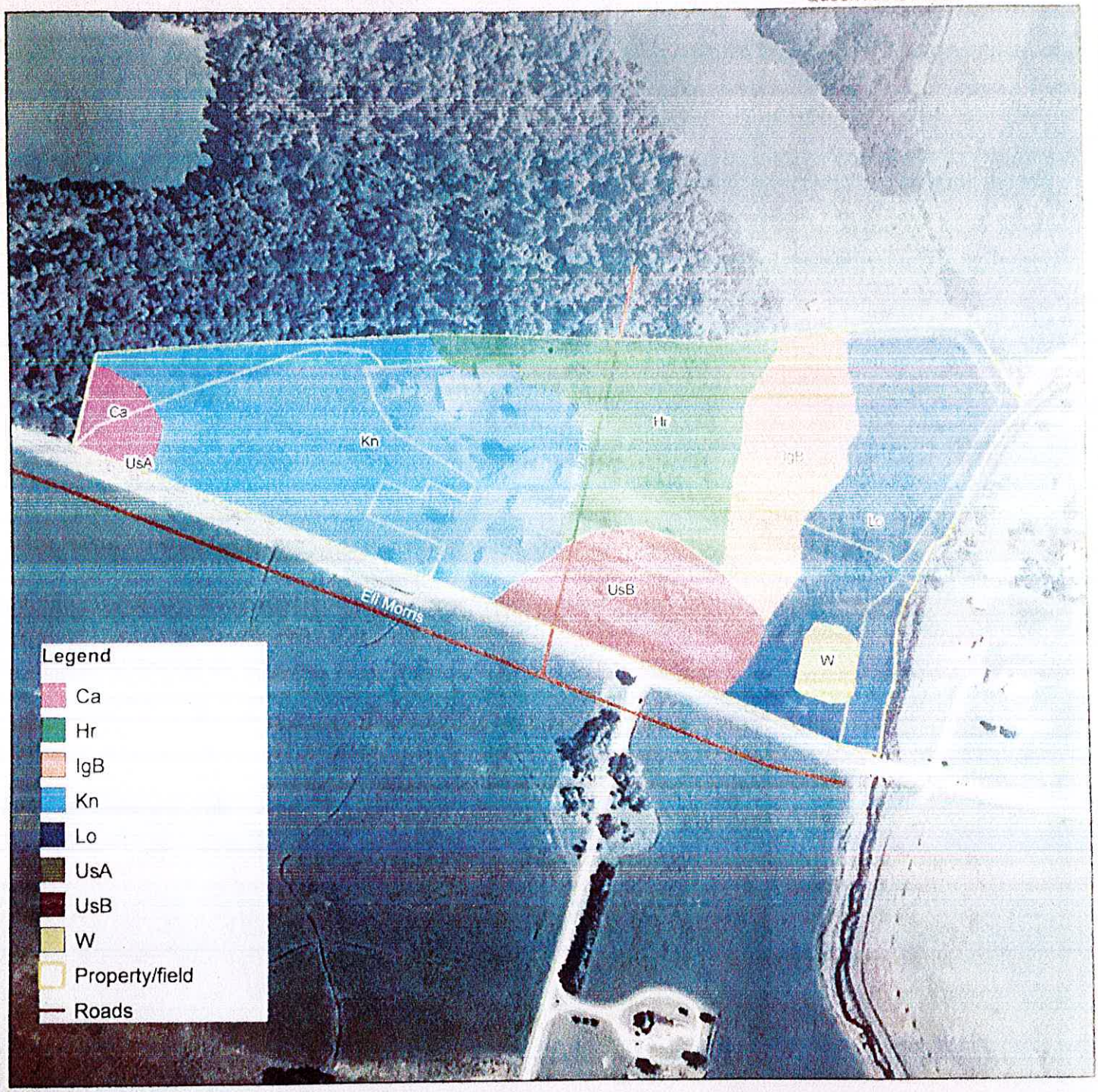
Owner/operator: Alan Eck

District: Queen Anne's SCD

12/30/2015

Assisted By: Carrie Jennings

Queen Anne's SCD



330 0 330 660 990 1,320 Feet

N

NRCS Natural Resources Conservation Service
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

Cropland

Tract: 615

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.7 ac	5	2011	2.7 ac	5/7/2011
2	48 ac	5	2011	48 ac	5/7/2011
4	3.8 ac	5	2011	3.8 ac	5/7/2011
5	2.1 ac	5	2011	2.1 ac	5/7/2011
7	45.6 ac	5	2011	45.6 ac	5/7/2011
Total:	102.2 ac			102.2 ac	

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.7 ac	6	2011	2.7 ac	6/7/2011
2	48 ac	6	2011	48 ac	6/7/2011
4	3.8 ac	6	2011	3.8 ac	6/7/2011
5	2.1 ac	6	2011	2.1 ac	6/7/2011
7	45.6 ac	6	2011	45.6 ac	6/7/2011
Total:	102.2 ac			102.2 ac	

Eck Farm

CONSERVATION PLAN – FARM MAP

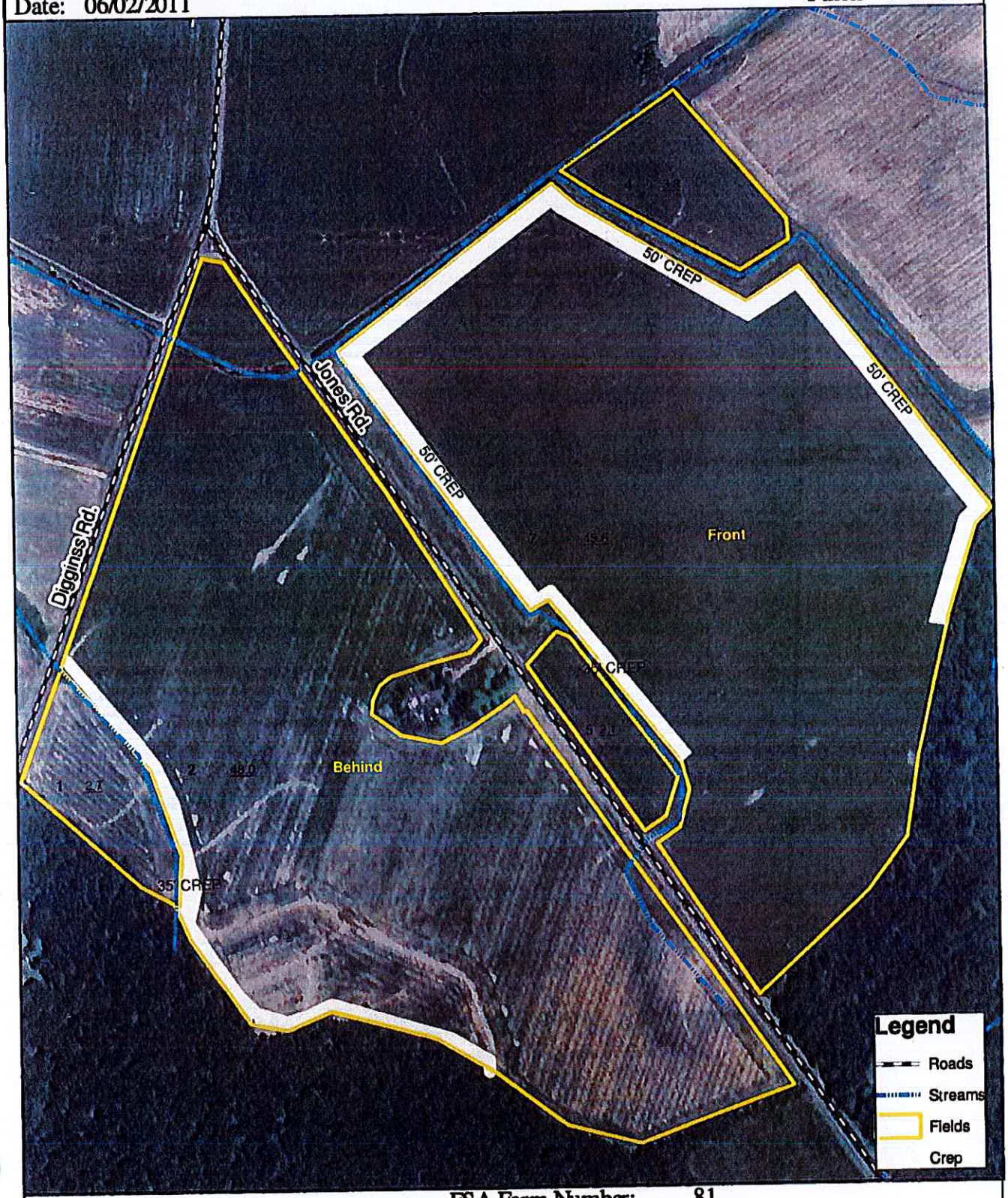
Mark Eck – Owner

Mae-Vue Farms, Mark Eck - Operator

Approximate Acres: 106.1

Date: 06/02/2011

1 inch = 365 feet



AET
agricultural, environmental & technical consulting

FSA Farm Number: 81

FSA Tract Number: 615

USGS Quadrangle(s): Goldsboro

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production. Follow the recommendations of Maryland Cooperative Extension or other pest management consultant. All chemicals shall be applied in accordance with the manufacturer's label recommendations and Maryland state law. Pesticide application records shall be maintained in accordance with the Maryland Department of Agriculture's requirements. Records will include the pest(s) controlled, treatment methods used, concentration and rate of pesticide applied, type of equipment used, date and time of application, and weather conditions at time of application. Follow a pest management plan that considers prevention, avoidance, and monitoring and suppression methods as appropriate.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.7 ac	6	2012		
2	48 ac	6	2012		
4	3.8 ac	6	2012		
5	2.1 ac	6	2012		
7	45.6 ac	6	2012		
Total:	102.2 ac				

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.7 ac	6	2012		
2	48 ac	6	2012		
4	3.8 ac	6	2012		
5	2.1 ac	6	2012		
7	45.6 ac	6	2012		
Total:	102.2 ac				

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

PUBLIC BURDEN STATEMENT

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PRIVACY ACT

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USDA NON-DISCRIMINATION STATEMENT

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, family status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer."

CONSERVATION PLAN – FARM MAP

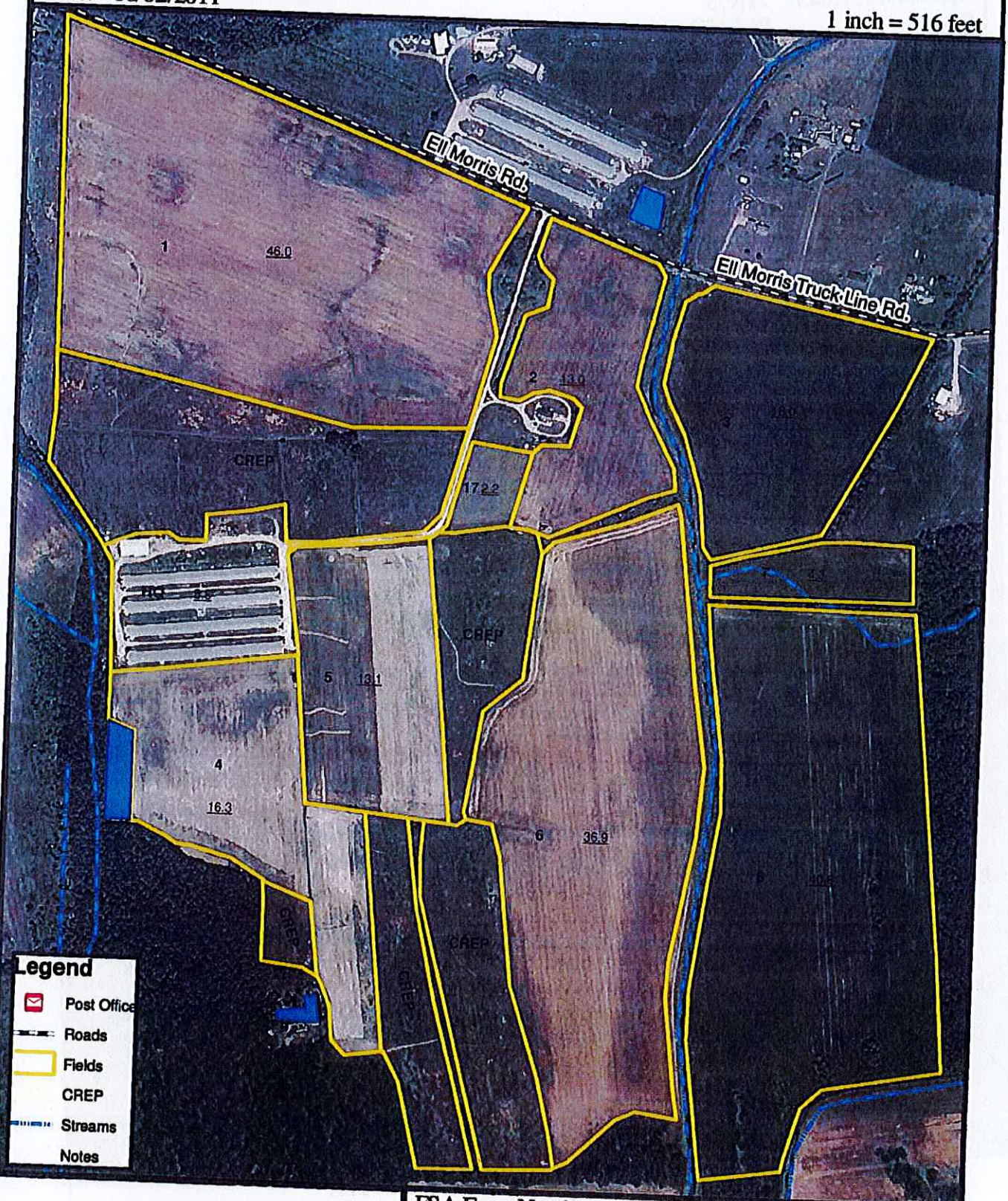
Mark Eck – Owner

Approximate Acres: 216.55

Date: 06/02/2011

Mae-Vue Farms, Mark Eck - Operator

1 inch = 516 feet



AET

agricultural, environmental & technical consulting

FSA Farm Number:	1117
FSA Tract Number:	6188
USGS Quadrangle(s):	Goldsboro

CONSERVATION PLAN – HEADQUARTERS MAP

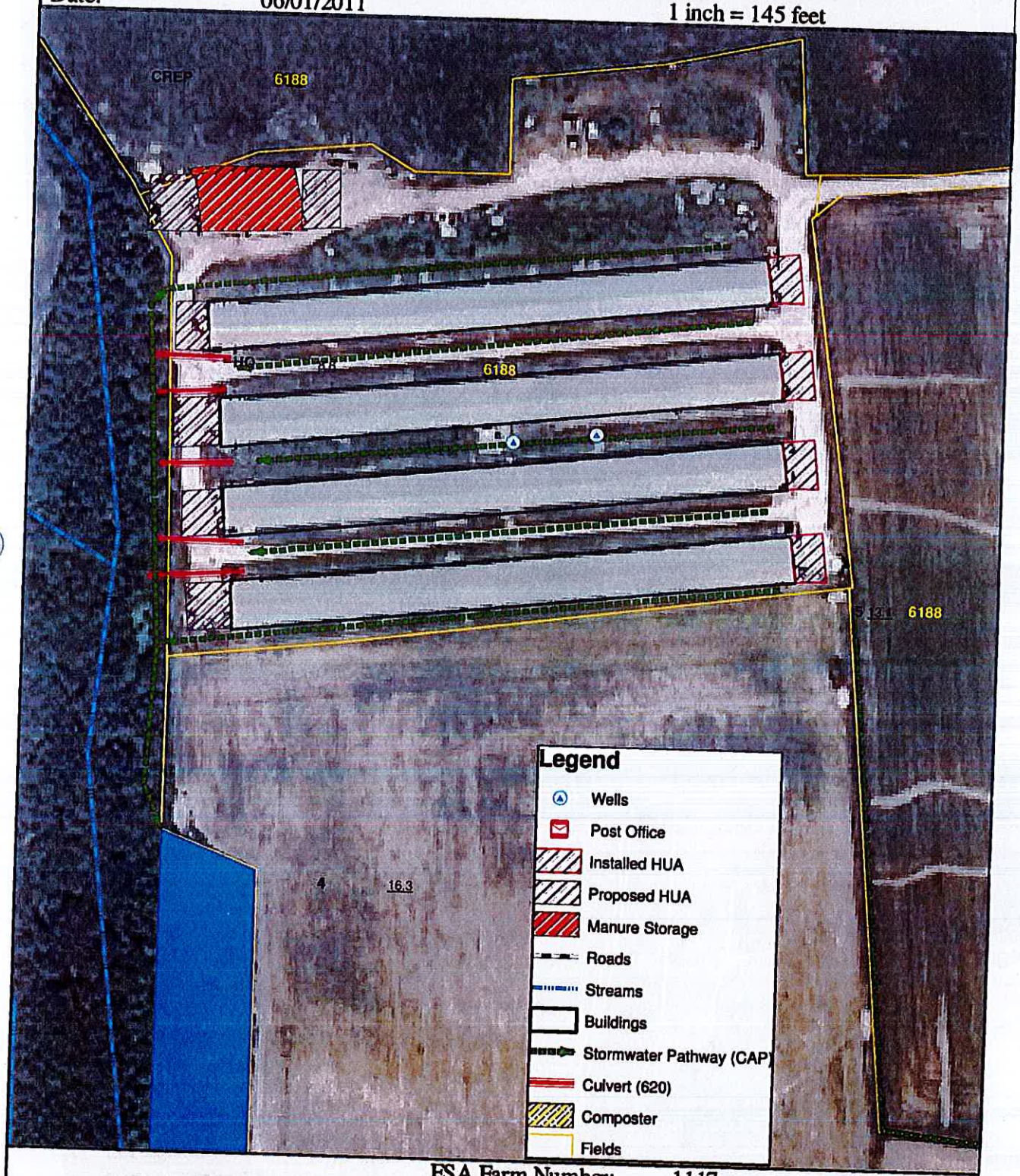
Mark Eck – Owner

Mae-Vue Farms, Mark Eck - Operator

Approximate Acres: 216.55

Date: 06/01/2011

1 inch = 145 feet



AET

agricultural, environmental & technical consulting

FSA Farm Number: 1117

FSA Tract Number: 6188

USGS Quadrangle(s): Goldsboro

NRCS Natural Resources Conservation Service
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

The main objective is to implement a Conservation Plan for the mandated compliance of the CAFO Permit.

Headquarters / Production Area

Tract: 6188

Amendments for the Treatment of Agricultural Waste

A litter amendment will be applied to the poultry house/s to reduce ammonia volatilization and to increase the proportion of nitrogen in the litter, making a more valuable and balanced fertilizer. Some amendments are also effective at reducing phosphorus solubility. Litter amendments can include the following: AL+, liquid AL+, Dry Alum, PLT, and Poultry Guard.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	432 ani	1	2012	432 ani	2/1/2012
HQ	432 ani	1	2013	432 ani	2/1/2013
HQ	432 ani	1	2014	432 ani	2/1/2014
Total:	1296 ani			1296 ani	

Access Road

Build a designated route or constructed travel way to be used by vehicles necessary for management of the operation. Use suitable materials for handling traffic loads and keep free of potholes and standing water. Seek engineering assistance from NRCS when needed to regrade or shape roadway. Operation & Maintenance: Inspect roadway following significant rainfall events. Repair damaged areas as soon as practical. Limit traffic during periods when use may cause damage to the surface.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1500 ft.	10	2009	1500 ft.	10/1/2009
Total:	1500 ft.			1500 ft.	

Animal Mortality Facility

Maintain 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.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1 no.	10	1994	1 no.	8/23/1994
Total:	1.0 no.			1.0 no.	

Comprehensive Nutrient Management Plan

Obtain a comprehensive nutrient management plan (CNMP) that describes and documents a conservation system within a conservation plan that is unique to animal feeding operations. The CNMP addresses all aspects of the Animal Feeding Operation including manure handling, nutrient management, feed management, and other conservation practices. Implementation of the CNMP is voluntary; however, any components that are funded through cost-share programs must be implemented as scheduled. State Law requires implementation of the Nutrient Management component.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1 no.	8	2011	1 no.	8/11/2011
Total:	1 no.			1 no.	

Filter Strip - Vegetative Buffer

Maintain an area indicated as a grass swale on the Conservation Plan Map. The area needs to be maintained lush vigorous sod for the purpose of preventing erosion. These vegetative critical areas will be monitored annually by the operator. The vegetation will slow the velocity of storm water and help to remove sediment, organic matter, and other nutrients from storm water runoff.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	0.2 ac	6	2010	0.2 ac	6/1/2010
Total:	0.2 ac			0.2 ac	

Heavy Use Area Protection

Construct and maintain a heavy use area at the back and front ends (access) of the poultry houses shown on the plan map where poultry manure and other waste products are handled. These structures will be 40'x40' concrete pads (or an approved substitute) at the entrance(s) to the house.The poultry pad will protect the soil from erosion and reduce nutrient contamination of surface and groundwater. Pads will be designed and installed according to NRCS standards and specifications, and will be maintained according to the attached Operation and Maintenance plan.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2012		
HQ	0.1 ac	11	2012		
HQ	0.1 ac	11	2012		
HQ	0.1 ac	11	2012		
Total:	0.8 ac			0.4 ac	

Heavy Use Area Protection

Construct a heavy use area (poultry pad) at the front and rear end (access) of the Manure Shed shown on the plan map where poultry manure and other waste products are handled. The poultry pad will protect the soil from erosion and reduce nutrient contamination of surface and groundwater. Pads will be designed and installed according to NRCS standards and specifications, and will be maintained according to the attached Operation and Maintenance plan.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	0.1 ac	11	2012	0.1 ac	6/1/2013
HQ	0.1 ac	11	2012	0.1 ac	6/1/2013
Total:	0.2 ac				

Nutrient Management

Manage the amount, form, placement and timing of plant nutrient application to protect surface and groundwater from runoff and/or leaching of nutrients. A Nutrient Management Plan (NMP) will be developed and followed for each crop to be grown on each field. This NMP will be developed by a consultant licensed and certified by the Maryland Department of Agriculture. The Maryland Water Quality Improvement Act of 1998 requires all nutrient management plans to address both nitrogen and phosphorus as the limiting nutrients. The NMP will account for all sources and forms of plant nutrients applied for plant growth and production. The amount of all nutrients applied must be based on a current analysis of the soil's potential to produce a realistic yield. All fields will have current soil test analysis of not more than 3 years old. Plans should be implemented as written, and updated at least once every 3 years or whenever there is a major change in the farming operation. Records will be kept which document handling and export of nutrient sources.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	9 ac	5	2010	9 ac	5/20/2010
Total:	9 ac			9 ac	

Waste Storage Facility

Construct and maintain a manure storage structure(s) at the location shown on the plan map. The structure will be built according to NRCS design, and operated and maintained in accordance with a Comprehensive Nutrient Management Plan or a Waste Management System plan developed for this operation. This structure will contain poultry litter and crust-outs from the operation. All necessary permits and notifications will be obtained before construction.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1 no	1	1990	1 no.	8/23/1994
Total:	1.0 no.			1.0 no.	

Underground Outlet

Install and maintain a underground (culvert pipes) pipeline to convey water from supply source to stable points below the production area. An engineering plan will be provided detailing the installation and material specifications for the pipeline. Operation and Maintenance: Inspect and test valves, pressure regulators, pumps, switches and other appurtenances to ensure proper functioning. Check for debris, minerals, algae and other materials which may restrict system flow.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	40 ft.	10	1990	40 ft.	10/1/1994
HQ	40 ft.	10	1994	40 ft.	10/1/1994
HQ	40 ft.	10	1994	40 ft.	10/1/1994
HQ	60 ft.	10	1994	60 ft.	10/1/1994
HQ	60 ft.	10	1994	60 ft.	10/1/1994
Total:	240 ft.			240 ft.	

Cropland

Tract: 6188

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	46 ac	5	2011	46 ac	5/7/2011
2	13 ac	5	2011	13 ac	5/7/2011
3	18 ac	5	2011	18 ac	5/7/2011
4	16.3 ac	5	2011	16.3 ac	5/7/2011

5	13.1 ac	5	2011	13.1 ac	5/7/2011
6	36.9 ac	5	2011	36.9 ac	5/7/2011
7	4.3 ac	5	2011	4.3 ac	5/7/2011

8	40.8 ac	5	2011	40.8 ac	5/7/2011
17	2.2 ac	5	2011	2.2 ac	5/7/2011
Total:	190.6 ac			190.6 ac	

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	46 ac	6	2011	46 ac	6/7/2011
2	13 ac	6	2011	13 ac	6/7/2011
3	18 ac	6	2011	18 ac	6/7/2011
4	16.3 ac	6	2011	16.3 ac	6/7/2011
5	13.1 ac	6	2011	13.1 ac	6/7/2011
6	36.9 ac	6	2011	36.9 ac	6/7/2011
7	4.3 ac	6	2011	4.3 ac	6/7/2011
8	40.8 ac	6	2011	40.8 ac	6/7/2011
17	2.2 ac	6	2011	2.2 ac	6/7/2011
Total:	190.6 ac			190.6 ac	

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production. Follow the recommendations of Maryland Cooperative Extension or other pest management consultant. All chemicals shall be applied in accordance with the manufacturer's label recommendations and Maryland state law. Pesticide application records shall be maintained in accordance with the Maryland Department of Agriculture's requirements. Records will include the pest(s) controlled, treatment methods used, concentration and rate of pesticide applied, type of equipment used, date and time of application, and weather conditions at time of application. Follow a pest management plan that considers prevention, avoidance, and monitoring and suppression methods as appropriate.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	46 ac	6	2012		
2	13 ac	6	2012		
3	18 ac	6	2012		
4	16.3 ac	6	2012		
5	13.1 ac	6	2012		
6	36.9 ac	6	2012		
7	4.3 ac	6	2012		
8	40.8 ac	6	2012		
17	2.2 ac	6	2012		
Total:	190.6 ac				

Pond

Manage a constructed pond to provide water and or recreation. Weeds shall be controlled. Quickly remove woody vegetation that begins to grow on the embankment to prevent root establishment. Earthen slopes shall be checked for soft or damp/wet areas that may be a sign of potential leakage. Burrowing animals in the slopes shall be controlled. Animals shall be immediately removed and the burrow holes filled.

Field	Planned Amount	Month	Year	Applied Amount	Date
4	1 no.	10	1980	1 no.	10/1/1980
Total:	1 no.			1 no.	

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	46 ac	6	2012		
2	13 ac	6	2012		
3	18 ac	6	2012		
4	16.3 ac	6	2012		
5	13.1 ac	6	2012		
6	36.9 ac	6	2012		
7	4.3 ac	6	2012		
8	40.8 ac	6	2012		
17	2.2 ac	6	2012		
Total:	190.6 ac				

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

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NRCS Natural Resources Conservation Service
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

The main objective is to implement a Conservation Plan for the mandated compliance of the CAFO Permit.

Headquarters / Production Area

Tract: 7075

Amendments for the Treatment of Agricultural Waste

A litter amendment will be applied to the poultry house/s to reduce ammonia volatilization and to increase the proportion of nitrogen in the litter, making a more valuable and balanced fertilizer. Some amendments are also effective at reducing phosphorus solubility. Litter amendments can include the following: AL+, liquid AL+, Dry Alum, PLT, and Poultry Guard.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	280 ani	1	2012	280 ani	2/1/2012
HQ	280 ani	1	2013	280 ani	2/1/2013
HQ	280 ani	1	2014	280 ani	2/1/2014
Total:	840 ani			840 ani	

Access Road

Build a designated route or constructed travel way to be used by vehicles necessary for management of the operation. Use suitable materials for handling traffic loads and keep free of potholes and standing water. Seek engineering assistance from NRCS when needed to regrade or shape roadway. Operation & Maintenance: Inspect roadway following significant rainfall events. Repair damaged areas as soon as practical. Limit traffic during periods when use may cause damage to the surface.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1300 ft.	10	2010	1300 ft.	10/1/2010
Total:	1300 ft.			1300 ft.	

Animal Mortality Facility

Maintain 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.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1 no.	10	2008	1 no.	10/1/2008
Total:	1.0 no.			1.0 no.	

CONSERVATION PLAN – FARM MAP

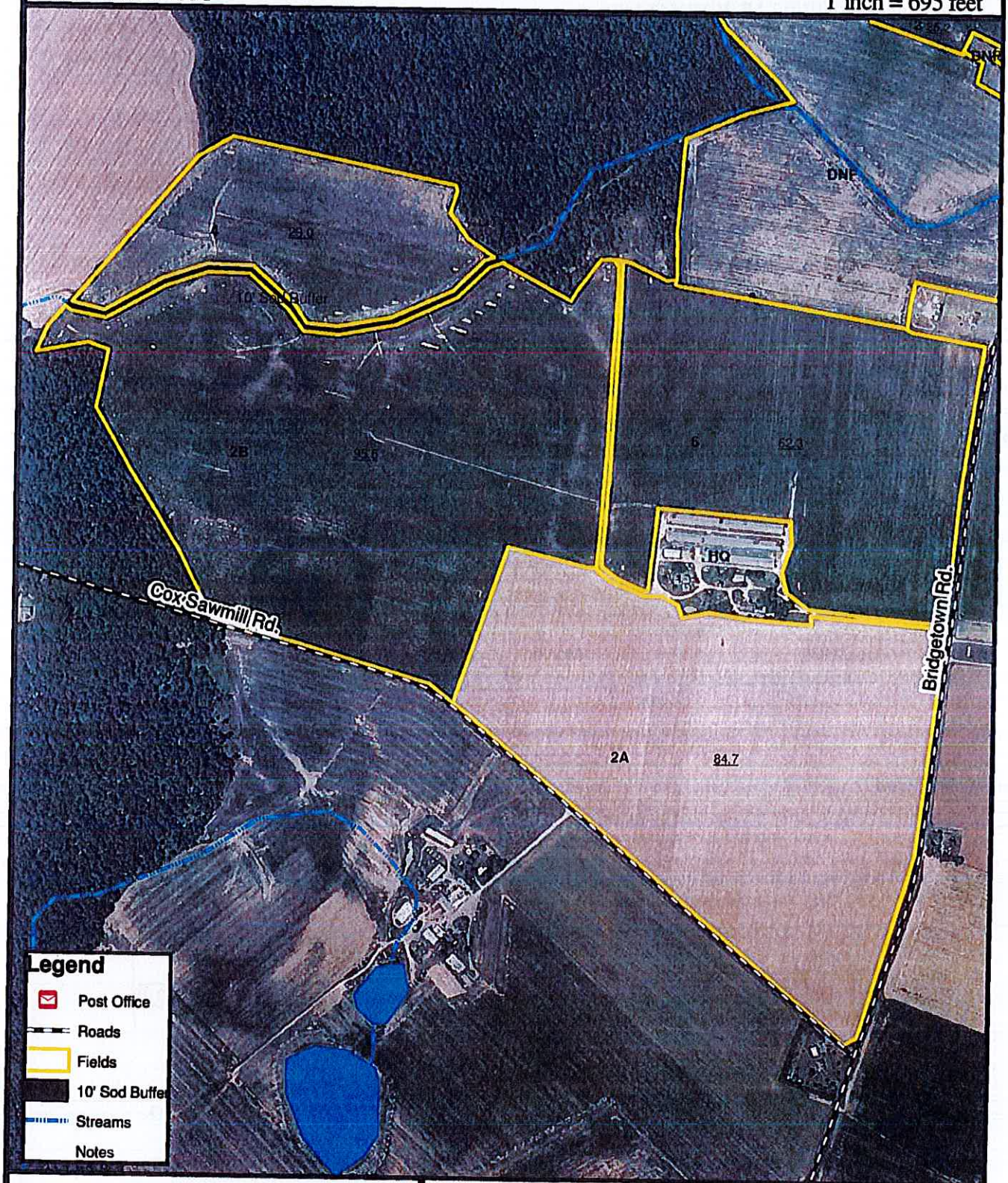
Mark Eck – Owner

Approximate Acres: 370.15

Date: 06/02/2011

Mae-Vue Farms, Mark Eck - Operator

1 inch = 695 feet



AET

agricultural, environmental & technical consulting

FSA Farm Number:	1863
FSA Tract Number:	7075
USGS Quadrangle(s):	Price

Comprehensive Nutrient Management Plan

Obtain a comprehensive nutrient management plan (CNMP) that describes and documents a conservation system within a conservation plan that is unique to animal feeding operations. The CNMP addresses all aspects of the Animal Feeding Operation including manure handling, nutrient management, feed management, and other conservation practices. Implementation of the CNMP is voluntary; however, any components that are funded through cost-share programs must be implemented as scheduled. State Law requires implementation of the Nutrient Management component.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1 no.	8	2011	1 no.	8/11/2011
Total:	1 no.			1 no.	

Filter Strip - Vegetative Buffer

Maintain an area indicated as a grass swale on the Conservation Plan Map. The area needs to be maintained lush vigorous sod for the purpose of preventing erosion. These vegetative critical areas will be monitored annually by the operator. The vegetation will slow the velocity of storm water and help to remove sediment, organic matter, and other nutrients from storm water runoff.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	0.3 ac	6	2010	0.3 ac	6/1/2010
Total:	0.3 ac			0.3 ac	

Heavy Use Area Protection

Construct and maintain a heavy use area at the front ends (access) of the poultry houses shown on the plan map where poultry manure and other waste products are handled. These structures will be 40'x40' concrete pads (or an approved substitute) at the entrance(s) to the house.The poultry pad will protect the soil from erosion and reduce nutrient contamination of surface and groundwater. Pads will be designed and installed according to NRCS standards and specifications, and will be maintained according to the attached Operation and Maintenance plan.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2006	0.1 ac	10/6/2006
HQ	0.1 ac	11	2012	0.1 ac	6/1/2012
HQ	0.1 ac	11	2012	0.1 ac	6/1/2012
Total:	0.6 ac			0.6 ac	

Heavy Use Area Protection

Construct a heavy use area (poultry pad) at the front end (access) of the Manure Shed shown on the plan map where poultry manure and other waste products are handled. The poultry pad will protect the soil from erosion and reduce nutrient contamination of surface and groundwater. Pads will be designed and installed according to NRCS standards and specifications, and will be maintained according to the attached Operation and Maintenance plan.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	0.1 ac	11	2010	0.1 ac	8/1/2010
HQ	0.1 ac	6	2012		
Total:	0.2 ac			0.1 ac	

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
2a	84.7 ac	6	2011	84.7 ac	6/7/2011
2b	95.5 ac	6	2011	95.5 ac	6/7/2011
4	29 ac	6	2011	29 ac	6/7/2011
6	62.3 ac	6	2011	62.3 ac	6/7/2011
Total:	271.5 ac			271.5 ac	

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
2a	84.7 ac	6	2012		
2b	95.5 ac	6	2012		
4	29 ac	6	2012		
6	62.3 ac	6	2012		
Total:	271.5 ac				

Nutrient Management

Manage the amount, form, placement and timing of plant nutrient application to protect surface and groundwater from runoff and/or leaching of nutrients. A Nutrient Management Plan (NMP) will be developed and followed for each crop to be grown on each field. This NMP will be developed by a consultant licensed and certified by the Maryland Department of Agriculture. The Maryland Water Quality Improvement Act of 1998 requires all nutrient management plans to address both nitrogen and phosphorus as the limiting nutrients. The NMP will account for all sources and forms of plant nutrients applied for plant growth and production. The amount of all nutrients applied must be based on a current analysis of the soil's potential to produce a realistic yield. All fields will have current soil test analysis of not more than 3 years old. Plans should be implemented as written, and updated at least once every 3 years or whenever there is a major change in the farming operation. Records will be kept which document handling and export of nutrient sources.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	7 ac	5	2010	7 ac	5/20/2010
Total:	7 ac			7 ac	

Waste Storage Facility

Construct and maintain a manure storage structure(s) at the location shown on the plan map. The structure will be built according to NRCS design, and operated and maintained in accordance with a Comprehensive Nutrient Management Plan or a Waste Management System plan developed for this operation. This structure will contain poultry litter and crust-outs from the operation. All necessary permits and notifications will be obtained before construction.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	1 no	1	1990	1 no.	1/19/1990
Total:	1.0 no.				

Underground Outlet

Install and maintain a underground (culvert pipes) pipeline to convey water from supply source to stable points below the production area. An engineering plan will be provided detailing the installation and material specifications for the pipeline. Operation and Maintenance: Inspect and test valves, pressure regulators, pumps, switches and other appurtenances to ensure proper functioning. Check for debris, minerals, algae and other materials which may restrict system flow.

Field	Planned Amount	Month	Year	Applied Amount	Date
HQ	40 ft.	10	1990	40 ft.	10/1/1990
HQ	40 ft.	10	1990	40 ft.	10/1/1990
Total:	80 ft.			80 ft.	

Cropland

Tract: 7075

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
2a	84.7 ac	5	2011	84.7 ac	6/7/2011
2b	95.5 ac	5	2011	95.5 ac	6/7/2011
4	29 ac	5	2011	29 ac	6/7/2011
6	62.3 ac	5	2011	62.3 ac	6/7/2011
Total:	271.5 ac			271.5 ac	

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

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CONSERVATION PLAN – FARM MAP

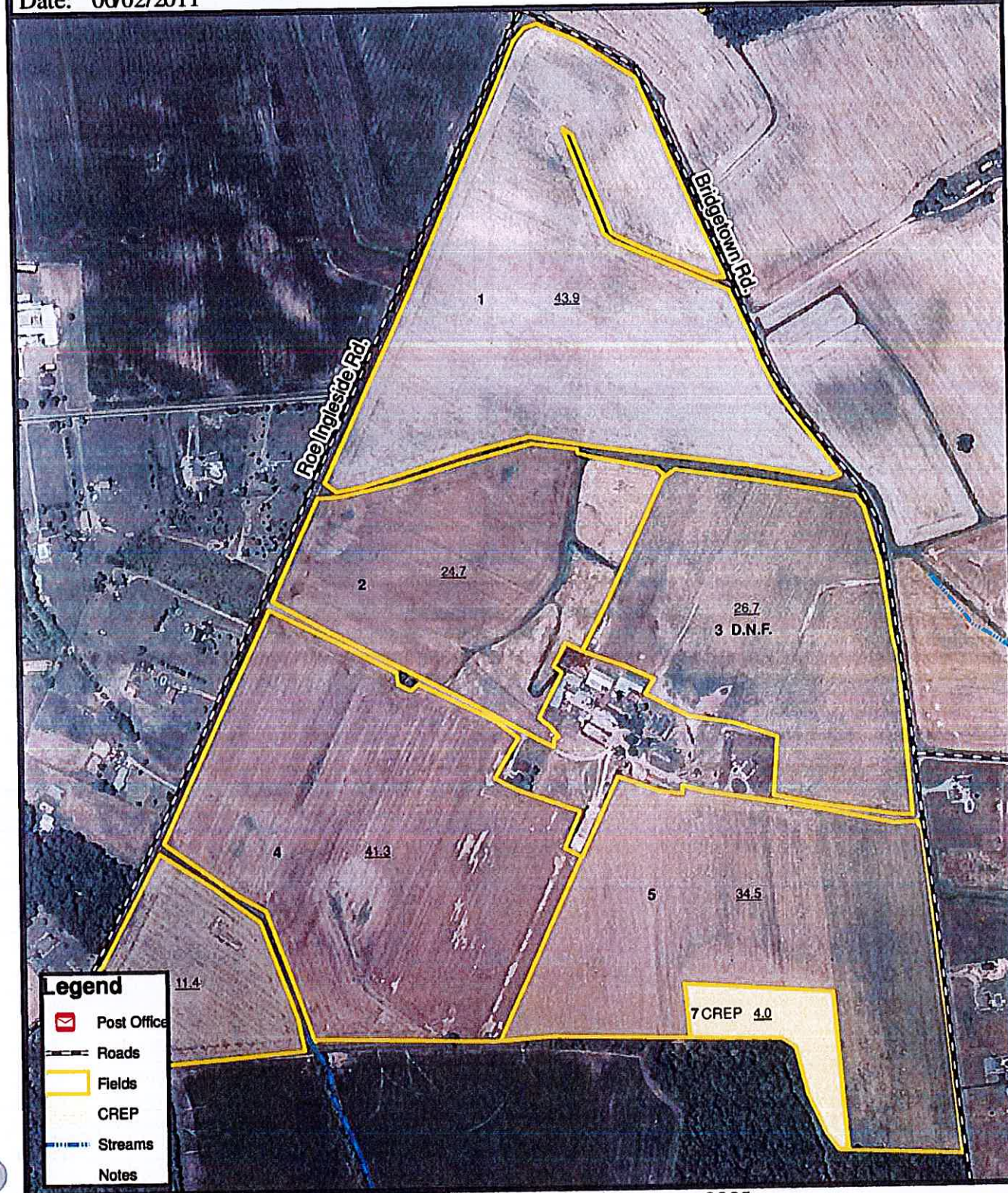
Skinner Trustees – Owner

Mae-Vue Farms, Mark Eck - Operator

Approximate Acres: 186.65

Date: 06/02/2011

1 inch = 530 feet



AET

agricultural, environmental & technical consulting

FSA Farm Number:	2325
FSA Tract Number:	979
USGS Quadrangle(s):	Price

NRCS Natural Resources Conservation Service
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
CENTREVILLE, MD 21617-1101
(410) 758-1671

David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

Cropland

Tract: 979

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	43.9 ac	5	2011	43.9 ac	5/7/2011
2	24.7 ac	5	2011	24.7 ac	5/7/2011
4	41.3 ac	5	2011	41.3 ac	5/7/2011
5	34.5 ac	5	2011	34.5 ac	5/7/2011
6	11.4 ac	5	2011	11.4 ac	5/7/2011
Total:	155.8 ac			155.8 ac	

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	43.9 ac	6	2011	43.9 ac	6/7/2011
2	24.7 ac	6	2011	24.7 ac	6/7/2011
4	41.3 ac	6	2011	41.3 ac	6/7/2011
5	34.5 ac	6	2011	34.5 ac	6/7/2011
6	11.4 ac	6	2011	11.4 ac	6/7/2011
Total:	155.8 ac			155.8 ac	

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production. Follow the recommendations of Maryland Cooperative Extension or other pest management consultant. All chemicals shall be applied in accordance with the manufacturer's label recommendations and Maryland state law. Pesticide application records shall be maintained in accordance with the Maryland Department of Agriculture's requirements. Records will include the pest(s) controlled, treatment methods used, concentration and rate of pesticide applied, type of equipment used, date and time of application, and weather conditions at time of application. Follow a pest management plan that considers prevention, avoidance, and monitoring and suppression methods as appropriate.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	43.9 ac	6	2012		
2	24.7 ac	6	2012		
4	41.3 ac	6	2012		
5	34.5 ac	6	2012		
6	11.4 ac	6	2012		
Total:	155.8 ac				

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	43.9 ac	6	2012		
2	24.7 ac	6	2012		
4	41.3 ac	6	2012		
5	34.5 ac	6	2012		
6	11.4 ac	6	2012		
Total:	155.8 ac				

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

PUBLIC BURDEN STATEMENT

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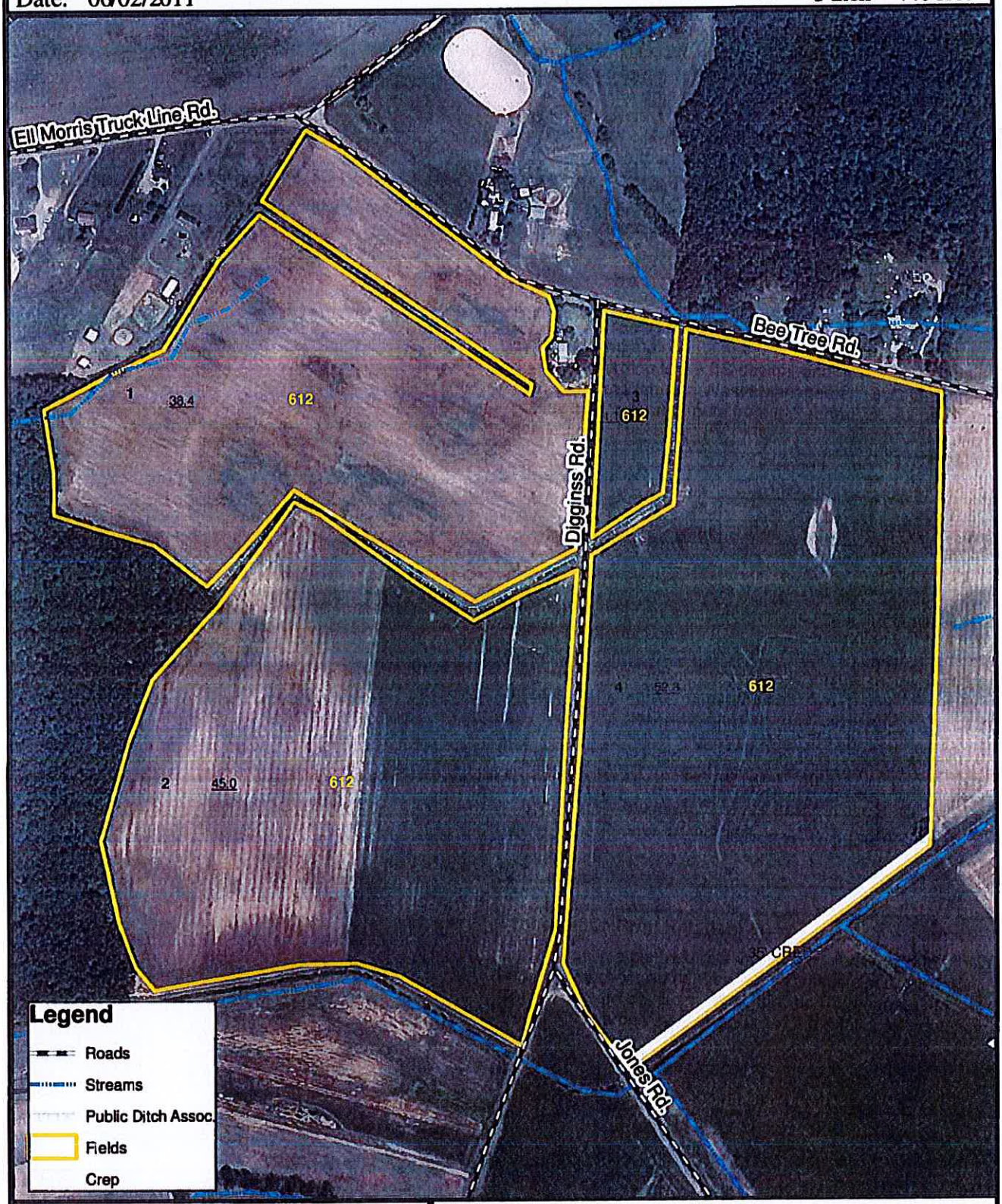
CONSERVATION PLAN – FARM MAP

Mark Eck – Owner ***Mae-Vue Farms, Mark Eck - Operator***

Approximate Acres: 139.82

Date: 06/02/2011 1 inch = 440 feet



AET
agricultural, environmental & technical consulting

FSA Farm Number:	95
FSA Tract Number:	612
USGS Quadrangle(s):	Goldsboro

NRCS Natural Resources Conservation Service
QUEEN ANNE'S COUNTY SERVICE CENTER
211 E WATER ST
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(410) 758-1671

David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

Cropland

Tract: 612

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount		Date
1	38.4 ac	5	2011	38.4	ac	5/7/2011
2	45 ac	5	2011	45	ac	5/7/2011
3	4.1 ac	5	2011	4.1	ac	5/7/2011
4	52.3 ac	5	2011	52.3	ac	5/7/2011
Total:	139.8 ac			139.8 ac		

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	38.4 ac	6	2011	38.4 ac	6/7/2011
2	45 ac	6	2011	45 ac	6/7/2011
3	4.1 ac	6	2011	4.1 ac	6/7/2011
4	52.3 ac	6	2011	52.3 ac	6/7/2011
Total:	139.8 ac			139.8 ac	

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production. Follow the recommendations of Maryland Cooperative Extension or other pest management consultant. All chemicals shall be applied in accordance with the manufacturer's label recommendations and Maryland state law. Pesticide application records shall be maintained in accordance with the Maryland Department of Agriculture's requirements. Records will include the pest(s) controlled, treatment methods used, concentration and rate of pesticide applied, type of equipment used, date and time of application, and weather conditions at time of application. Follow a pest management plan that considers prevention, avoidance, and monitoring and suppression methods as appropriate.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	38.4 ac	6	2012		
2	45 ac	6	2012		
3	4.1 ac	6	2012		
4	52.3 ac	6	2012		
Total:	139.8 ac				

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	38.4 ac	6	2012		
2	45 ac	6	2012		
3	4.1 ac	6	2012		
4	52.3 ac	6	2012		
Total:	139.8 ac				

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

PUBLIC BURDEN STATEMENT

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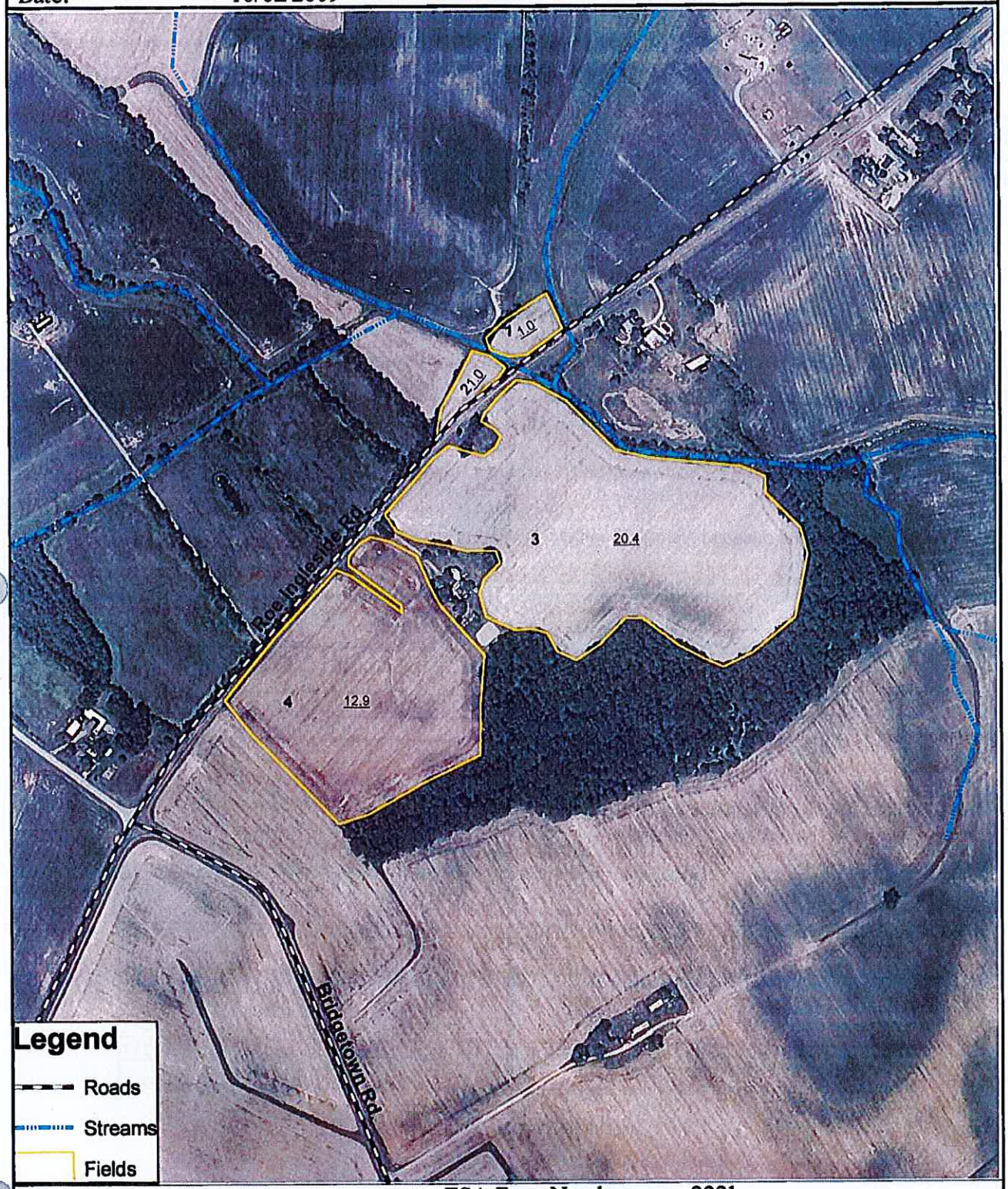
CONSERVATION PLAN – FARM MAP

Skinner Trustees – Owner ***Mark Eck - Operator***

Approximate Acres: 35.32

Date: 10/02/2009 1 inch = 490 feet



agricultural, environmental & technical consulting

FSA Farm Number: 2221

FSA Tract Number: 135

USGS Quadrangle(s): Price

NRCS Natural Resources Conservation Service
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David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

Cropland

Tract: 135

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 ac	5	2011	1 ac	5/7/2011
2	1 ac	5	2011	1 ac	5/7/2011
3	20.4 ac	5	2011	20.4 ac	5/7/2011
4	12.9 ac	5	2011	12.9 ac	5/7/2011
Total:	35.3 ac			35.3 ac	

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 ac	6	2011	1 ac	6/7/2011
2	1 ac	6	2011	1 ac	6/7/2011
3	20.4 ac	6	2011	20.4 ac	6/7/2011
4	12.9 ac	6	2011	12.9 ac	6/7/2011
Total:	35.3 ac			35.3 ac	

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production. Follow the recommendations of Maryland Cooperative Extension or other pest management consultant. All chemicals shall be applied in accordance with the manufacturer's label recommendations and Maryland state law. Pesticide application records shall be maintained in accordance with the Maryland Department of Agriculture's requirements. Records will include the pest(s) controlled, treatment methods used, concentration and rate of pesticide applied, type of equipment used, date and time of application, and weather conditions at time of application. Follow a pest management plan that considers prevention, avoidance, and monitoring and suppression methods as appropriate.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 ac	6	2012		
2	1 ac	6	2012		
3	20.4 ac	6	2012		
4	12.9 ac	6	2012		
Total:	35.3 ac				

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	1 ac	6	2012		
2	1 ac	6	2012		
3	20.4 ac	6	2012		
4	12.9 ac	6	2012		
Total:	35.3 ac				

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

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CONSERVATION PLAN – FARM MAP

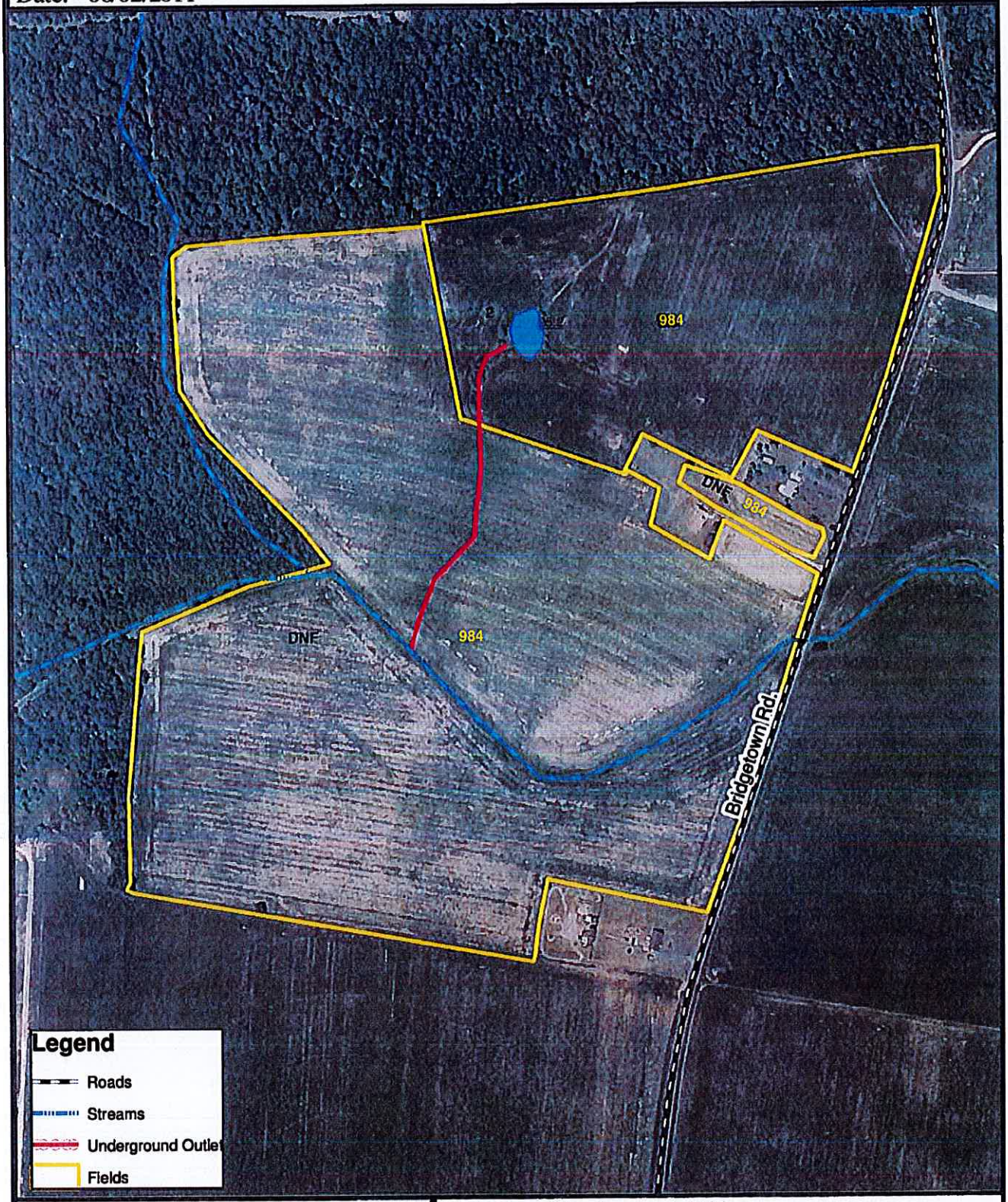
Nancy Weaver – Owner

Mae-Vue Farms, Mark Eck - Operator

Approximate Acres: 102.32

Date: 06/02/2011

1 inch = 400 feet



AET

agricultural, environmental & technical consulting

FSA Farm Number:	844
FSA Tract Number:	984
USGS Quadrangle(s):	Price

NRCS Natural Resources Conservation Service
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(410) 758-1671

David D. Kann
Conservation Planner
AET agricultural, environmental & technical consulting

Conservation Plan

MARK ECK
450 ELL MORRIS ROAD
HENDERSON, MD 21640

OBJECTIVES

The Conservation Plan addresses best management practices for sustaining and improving the natural resource base on the farm. It is the responsibility of the landuser to obtain all necessary or appropriate permits. All practices are to be maintained to ensure that their intended purposes are achieved. No significant cultural resources are known to exist on the farm.

Cropland

Tract: 984

Conservation Crop Rotation

Grow crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Plant crops as listed: a rotation of Corn, Smgrain cc, Corn, Smgrain, dc Soybeans. Generally High residue no-tilled crops such as corn, grain, or hay crops may be added to the rotation without increasing soil loss.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	25.2 ac	5	2011	25.2 ac	5/7/2011
Total:	25.2 ac			25.2 ac	

Nutrient Management

Lime and fertilizer will be applied in accordance with a nutrient management plan (NMP) prepared by a certified nutrient management consultant licensed by the Maryland Department of Agriculture. Fields with a Phosphorus Fertility Index Value (FIV-P) >150 shall be analyzed with the MD Phosphorus Site Index and NMP's developed accordingly. Application equipment must be properly calibrated and maintained. Adequate records shall be maintained.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	25.2 ac	6	2011	25.2 ac	6/7/2011
Total:	25.2 ac			25.2 ac	

Pest Management

Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth and crop production. Follow the recommendations of Maryland Cooperative Extension or other pest management consultant. All chemicals shall be applied in accordance with the manufacturer's label recommendations and Maryland state law. Pesticide application records shall be maintained in accordance with the Maryland Department of Agriculture's requirements. Records will include the pest(s) controlled, treatment methods used, concentration and rate of pesticide applied, type of equipment used, date and time of application, and weather conditions at time of application. Follow a pest management plan that considers prevention, avoidance, and monitoring and suppression methods as appropriate.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	25.2 ac	6	2012		
Total:	25.2 ac				

Pond

Manage a constructed pond to provide water and or recreation. Weeds shall be controlled. Quickly remove woody vegetation that begins to grow on the embankment to prevent root establishment. Earthen slopes shall be checked for soft or damp/wet areas that may be a sign of potential leakage. Burrowing animals in the slopes shall be controlled. Animals shall be immediately removed and the burrow holes filled.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	1 no.	10	1980	1 no.	10/1/1980
Total:	1 no.			1 no.	

Residue and Tillage Management, No-Till

Following an appropriate rotation, use no-till planting methods for planting the crops listed below. Crops will be planted directly into prior crop residues or into a cover crop. Planting into corn stubble, 50% or greater residue ground cover should remain after the planting process. Planting behind soybeans, at least 40% residue cover should remain after planting.

Field	Planned Amount	Month	Year	Applied Amount	Date
2	25.2 ac	6	2012		
Total:	25.2 ac				

CERTIFICATION OF PARTICIPANTS

Mark Eck _____ DATE _____

CERTIFICATION OF:

DESIGNATED CONSERVATIONIST

NRCS Representative _____ DATE _____

CONSERVATION PLANNER

David D. Kann _____ DATE _____

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Soils Information

Soils Data & Descriptions

See Soils Info Section (on the following pages)

RUSLE2 Calculations

Map Unit Legend

Queen Anne's County, Maryland

Map Unit: CaA—Carmichael loam, 0 to 2 percent slopes

Component: Carmichael, drained (45%)

The Carmichael, drained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Carmichael, undrained (35%)

The Carmichael, undrained component makes up 35 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Pineyneck (10%)

Generated brief soil descriptions are created for major components. The Pineyneck soil is a minor component.

Component: Fallsington, drained (5%)

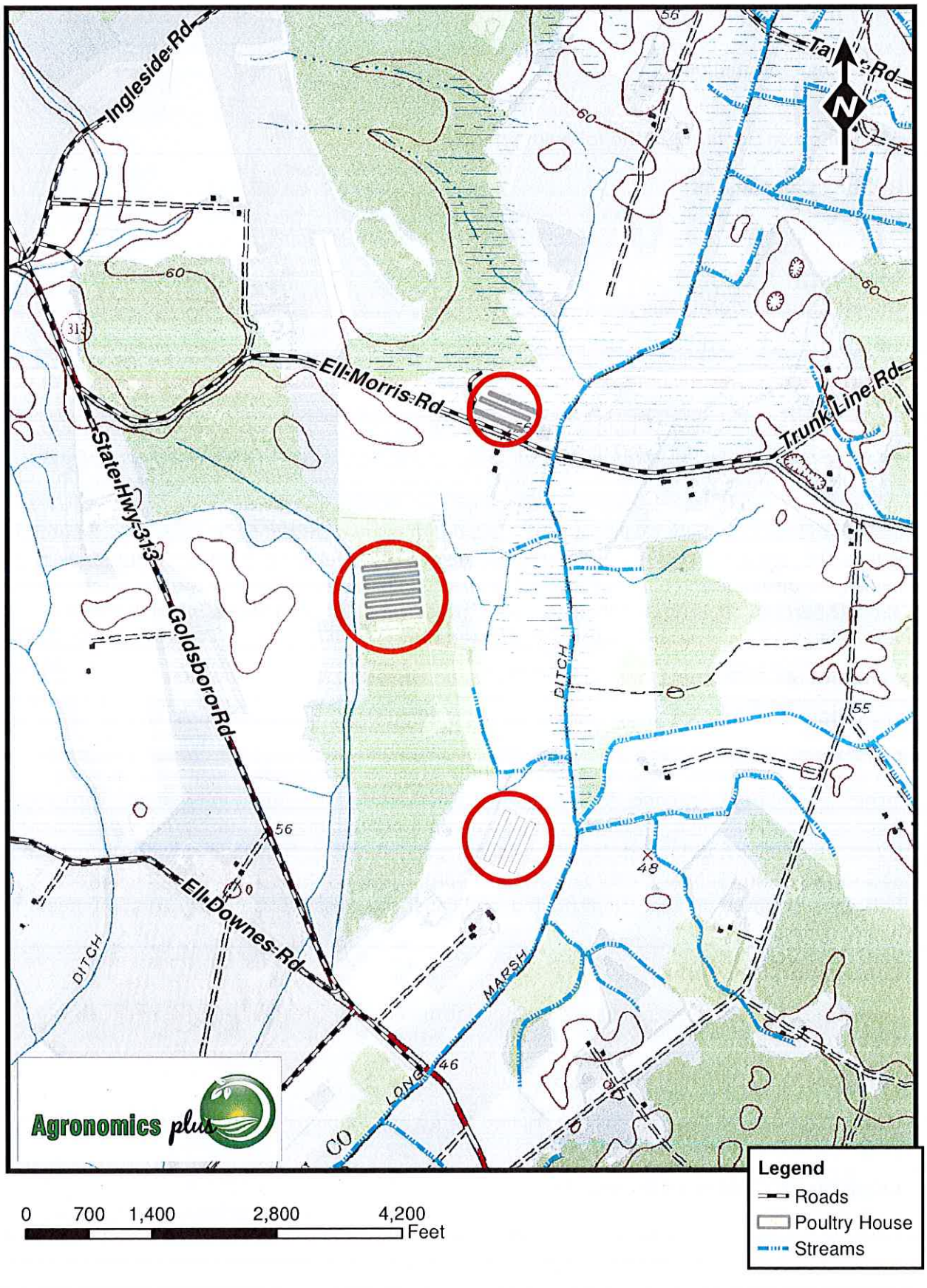
Generated brief soil descriptions are created for major components. The Fallsington soil is a minor component.

Component: Corsica, undrained (5%)

Generated brief soil descriptions are created for major components. The Corsica soil is a minor component.

Alan Eck

Topo Map



Map Unit: CoA—Corsica mucky loam, 0 to 2 percent slopes

Component: Corsica, undrained (55%)

The Corsica, undrained component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on broad depressions, flats, uplands. The parent material consists of loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April. Organic matter content in the surface horizon is about 38 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Corsica, drained (25%)

The Corsica, drained component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 5 inches during January, February, March. Organic matter content in the surface horizon is about 9 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major components. The Woodstown soil is a minor component.

Component: Kentuck, undrained (5%)

Generated brief soil descriptions are created for major components. The Kentuck soil is a minor component.

Component: Hurlock, drained (5%)

Generated brief soil descriptions are created for major components. The Hurlock soil is a minor component.

Component: Fallsington, drained (5%)

Generated brief soil descriptions are created for major components. The Fallsington soil is a minor component.

Map Unit: DOE—Downer soils, 15 to 30 percent slopes

Component: Downer, loamy sand (35%)

The Downer, loamy sand component makes up 35 percent of the map unit. Slopes are 15 to 30 percent. This component is on uplands, low hills. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

Component: Downer, sandy loam (30%)

The Downer, sandy loam component makes up 30 percent of the map unit. Slopes are 15 to 30 percent. This component is on uplands, low hills. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

Component: Galestown (10%)

Generated brief soil descriptions are created for major components. The Galestown soil is a minor component.

Component: Ingleside (10%)

Generated brief soil descriptions are created for major components. The Ingleside soil is a minor component.

Component: Fort Mott (5%)

Generated brief soil descriptions are created for major components. The Fort Mott soil is a minor component.

Component: Unicorn (5%)

Generated brief soil descriptions are created for major components. The Unicorn soil is a minor component.

Component: Longmarsh (5%)

Generated brief soil descriptions are created for major components. The Longmarsh soil is a minor component.

Map Unit: DUD—Downer and Unicorn soils, 10 to 15 percent slopes

Component: Downer (45%)

The Downer component makes up 45 percent of the map unit. Slopes are 10 to 15 percent. This component is on uplands, low hills. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Unicorn (35%)

The Unicorn component makes up 35 percent of the map unit. Slopes are 10 to 15 percent. This component is on uplands, low hills. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major components. The Ingleside soil is a minor component.

Component: Fort Mott (5%)

Generated brief soil descriptions are created for major components. The Fort Mott soil is a minor component.

Component: Longmarsh (5%)

Generated brief soil descriptions are created for major components. The Longmarsh soil is a minor component.

Component: Galestown (3%)

Generated brief soil descriptions are created for major components. The Galestown soil is a minor component.

Component: Sassafras (2%)

Generated brief soil descriptions are created for major components. The Sassafras soil is a minor component.

Map Unit: FgcA—Fallsington loams, 0 to 2 percent slopes, Mid-Altlantic Coastal Plain

Component: Fallsington, undrained (38%)

The Fallsington, undrained component makes up 38 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on coastal plains. The parent material consists of loamy fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches (depth from the mineral surface is 3 inches) during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Fallsington, drained (37%)

Generated brief soil descriptions are created for major components. The Fallsington soil is a minor component.

Component: Hammonton (7%)

Generated brief soil descriptions are created for major components. The Hammonton soil is a minor component.

Component: Woodstown (7%)

Generated brief soil descriptions are created for major components. The Woodstown soil is a minor component.

Component: Othello (6%)

Generated brief soil descriptions are created for major components. The Othello soil is a minor component.

Component: Marshyhope (5%)

Generated brief soil descriptions are created for major components. The Marshyhope soil is a minor component.

Map Unit: HnA—Hammonton sandy loam, 0 to 2 percent slopes

Component: Hammonton (80%)

The Hammonton component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats, shallow depressions. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Klej (5%)

Generated brief soil descriptions are created for major components. The Klej soil is a minor component.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major components. The Ingleside soil is a minor component.

Component: Hurlock, drained (5%)

Generated brief soil descriptions are created for major components. The Hurlock soil is a minor component.

Component: Rosedale (5%)

Generated brief soil descriptions are created for major components. The Rosedale soil is a minor component.

Map Unit: HvA—Hurlock sandy loam, 0 to 2 percent slopes

Component: Hurlock, drained (42%)

The Hurlock, drained component makes up 42 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of Loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Hurlock, undrained (38%)

The Hurlock, undrained component makes up 38 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of Loamy fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal

zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Klej (5%)

Generated brief soil descriptions are created for major components. The Klej soil is a minor component.

Component: Mullica, drained (5%)

Generated brief soil descriptions are created for major components. The Mullica soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major components. The Hammonton soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major components. The Woodstown soil is a minor component.

Map Unit: IgB—Ingleside sandy loam, 2 to 5 percent slopes

Component: Ingleside (75%)

The Ingleside component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Rosedale (5%)

Generated brief soil descriptions are created for major components. The Rosedale soil is a minor component.

Component: Downer (5%)

Generated brief soil descriptions are created for major components. The Downer soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major components. The Woodstown soil is a minor component.

Component: Cedartown (5%)

Generated brief soil descriptions are created for major components. The Cedartown soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major components. The Hammonton soil is a minor component.

Map Unit: IgC—Ingleside sandy loam, 5 to 10 percent slopes

Component: Ingleside (75%)

The Ingleside component makes up 75 percent of the map unit. Slopes are 5 to 10 percent. This component is on knolls, uplands, fluviomarine terraces. The parent material consists of loamy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Cedartown (5%)

Generated brief soil descriptions are created for major components. The Cedartown soil is a minor component.

Component: Rosedale (5%)

Generated brief soil descriptions are created for major components. The Rosedale soil is a minor component.

Component: Downer (5%)

Generated brief soil descriptions are created for major components. The Downer soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major components. The Woodstown soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major components. The Hammonton soil is a minor component.

Map Unit: KnA—Kentuck mucky silt loam, 0 to 2 percent slopes

Component: Kentuck, undrained (45%)

The Kentuck, undrained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on lowlands, depressions. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Kentuck, drained (30%)

The Kentuck, drained component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions, lowlands. The parent material consists of silty

eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 5 inches during January, February, March. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Whitemarsh, undrained (10%)

Generated brief soil descriptions are created for major components. The Whitemarsh soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Component: Crosiadore (5%)

Generated brief soil descriptions are created for major components. The Crosiadore soil is a minor component.

Component: Othello, undrained (5%)

Generated brief soil descriptions are created for major components. The Othello soil is a minor component.

Map Unit: LO—Longmarsh and Indiantown soils, frequently flooded

Component: Longmarsh (43%)

The Longmarsh component makes up 43 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains, coastal plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Indiantown (37%)

The Indiantown component makes up 37 percent of the map unit. Slopes are 0 to 1 percent. This component is on coastal plains, flood plains. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Zekiah (10%)

Generated brief soil descriptions are created for major components. The Zekiah soil is a minor component.

Component: Manahawkin (5%)

Generated brief soil descriptions are created for major components. The Manahawkin soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major components. The Klej soil is a minor component.

Map Unit: MkB—Matapeake silt loam, 2 to 5 percent slopes

Component: Matapeake (80%)

The Matapeake component makes up 80 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Nassawango (10%)

Generated brief soil descriptions are created for major components. The Nassawango soil is a minor component.

Component: Butlertown (5%)

Generated brief soil descriptions are created for major components. The Butlertown soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Map Unit: MkC—Matapeake silt loam, 5 to 10 percent slopes

Component: Matapeake (80%)

The Matapeake component makes up 80 percent of the map unit. Slopes are 5 to 10 percent. This component is on low hills, uplands. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Nassawango (10%)

Generated brief soil descriptions are created for major components. The Nassawango soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Component: Greenwich (5%)

Generated brief soil descriptions are created for major components. The Greenwich soil is a minor component.

Map Unit: MqA—Mattapex-Butlertown silt loams, 0 to 2 percent slopes

Component: Mattapex (40%)

The Mattapex component makes up 40 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of silty eolian deposits over fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Butlertown (35%)

The Butlertown component makes up 35 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of silty eolian deposits over sandy or loamy fluviomarine deposits. Depth to a root restrictive layer, fragipan, is 24 to 39 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 26 inches during February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Crosiadore (10%)

Generated brief soil descriptions are created for major components. The Crosiadore soil is a minor component.

Component: Nassawango (5%)

Generated brief soil descriptions are created for major components. The Nassawango soil is a minor component.

Component: Pineyneck (5%)

Generated brief soil descriptions are created for major components. The Pineyneck soil is a minor component.

Component: Carmichael, drained (3%)

Generated brief soil descriptions are created for major components. The Carmichael soil is a minor component.

Component: Othello, drained (2%)

Generated brief soil descriptions are created for major components. The Othello soil is a minor component.

Map Unit: MqB—Mattapex-Butlertown silt loams, 2 to 5 percent slopes

Component: Mattapex (40%)

The Mattapex component makes up 40 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of silty eolian deposits over fluviomarine sediments fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Butlertown (35%)

The Butlertown component makes up 35 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of silty eolian deposits over sandy or loamy fluviomarine deposits. Depth to a root restrictive layer, fragipan, is 24 to 39 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 26 inches during February, March. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Pineyneck (10%)

Generated brief soil descriptions are created for major components. The Pineyneck soil is a minor component.

Component: Crosiadore (5%)

Generated brief soil descriptions are created for major components. The Crosiadore soil is a minor component.

Component: Nassawango (5%)

Generated brief soil descriptions are created for major components. The Nassawango soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major components. The Hammonton soil is a minor component.

Map Unit: NsA—Nassawango silt loam, 0 to 2 percent slopes

Component: Nassawango (80%)

The Nassawango component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 1. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Component: Matapeake (5%)

Generated brief soil descriptions are created for major components. The Matapeake soil is a minor component.

Component: Crosiadore (5%)

Generated brief soil descriptions are created for major components. The Crosiadore soil is a minor component.

Component: Othello, drained (5%)

Generated brief soil descriptions are created for major components. The Othello soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Map Unit: OtA—Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain

Component: Othello, drained (48%)

The Othello, drained component makes up 48 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, coastal plains. The parent material consists of silty eolian deposits over fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Othello, undrained (28%)

The Othello, undrained component makes up 28 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on coastal plains. The parent material consists of silty eolian deposits over fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches (depth from the mineral surface is 3 inches) during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Crosiadore (7%)

Generated brief soil descriptions are created for major soil components. The Crosiadore soil is a minor component.

Component: Mattapex (7%)

Generated brief soil descriptions are created for major soil components. The Mattapex soil is a minor component.

Component: Fallsington, undrained (5%)

Generated brief soil descriptions are created for major soil components. The Fallsington soil is a minor component.

Component: Kentuck, undrained (5%)

Generated brief soil descriptions are created for major soil components. The Kentuck soil is a minor component.

Map Unit: PiA—Pineyneck silt loam, 0 to 2 percent slopes

Component: Pineyneck (80%)

The Pineyneck component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Unicorn (10%)

Generated brief soil descriptions are created for major components. The Unicorn soil is a minor component.

Component: Carmichael, drained (5%)

Generated brief soil descriptions are created for major components. The Carmichael soil is a minor component.

Component: Greenwich (5%)

Generated brief soil descriptions are created for major components. The Greenwich soil is a minor component.

Map Unit: PiB—Pineyneck silt loam, 2 to 5 percent slopes

Component: Pineyneck (75%)

The Pineyneck component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during February. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Unicorn (10%)

Generated brief soil descriptions are created for major components. The Unicorn soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major components. The Ingleside soil is a minor component.

Component: Crosiadore (5%)

Generated brief soil descriptions are created for major components. The Crosiadore soil is a minor component.

Map Unit: UsB—Unicorn-Sassafras loams, 2 to 5 percent slopes

Component: Unicorn (40%)

The Unicorn component makes up 40 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Sassafras (35%)

The Sassafras component makes up 35 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major components. The Ingleside soil is a minor component.

Component: Nassawango (5%)

Generated brief soil descriptions are created for major components. The Nassawango soil is a minor component.

Component: Pineyneck (5%)

Generated brief soil descriptions are created for major components. The Pineyneck soil is a minor component.

Component: Downer (5%)

Generated brief soil descriptions are created for major components. The Downer soil is a minor component.

Map Unit: UsC—Unicorn-Sassafras loams, 5 to 10 percent slopes

Component: Unicorn (40%)

The Unicorn component makes up 40 percent of the map unit. Slopes are 5 to 10 percent. This component is on uplands, low hills. The parent material consists of loamy eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Sassafras (35%)

The Sassafras component makes up 35 percent of the map unit. Slopes are 5 to 10 percent. This component is on uplands, low hills. The parent material consists of loamy fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Downer (5%)

Generated brief soil descriptions are created for major components. The Downer soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Component: Nassawango (5%)

Generated brief soil descriptions are created for major components. The Nassawango soil is a minor component.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major components. The Ingleside soil is a minor component.

Component: Pineyneck (5%)

Generated brief soil descriptions are created for major components. The Pineyneck soil is a minor component.

Map Unit: W—Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map Unit: WhA—Whitemarsh silt loam, 0 to 2 percent slopes

Component: Whitemarsh, drained (45%)

The Whitemarsh, drained component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on lowlands, flats. The parent material consists of silty eolian

deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. A seasonal zone of water saturation is at 14 inches during January, February, March, April. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Whitemarsh, undrained (30%)

The Whitemarsh, undrained component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands. The parent material consists of silty eolian deposits over fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 5 inches during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Crosiadore (10%)

Generated brief soil descriptions are created for major components. The Crosiadore soil is a minor component.

Component: Othello, drained (5%)

Generated brief soil descriptions are created for major components. The Othello soil is a minor component.

Component: Kentuck, undrained (5%)

Generated brief soil descriptions are created for major components. The Kentuck soil is a minor component.

Component: Mattapex (5%)

Generated brief soil descriptions are created for major components. The Mattapex soil is a minor component.

Implementation Schedule for the Farm Operation

Schedule of Operations

This section describes the practice or action necessary for implementing this comprehensive plan. This element addresses the components and activities associated with the livestock production facility.

IMPORTANT!

All practices have been installed and are being managed appropriately.

Practice and Facility Implementation Schedule

N/A

☑ **All resource concerns have been addressed. ALL BMPs associated with the production area and associated facilities, to address these concerns, have been completed and no additional best management practices are recommended or required at this time.** ***(this item will be checked only after the entire Schedule of Implementation has been implemented and no other resource concerns have been identified)***

Schedule of Implementation Agreement

The schedule of conservation practices presented here has been reviewed by the person responsible for compliance with the requirements of the agricultural farm operation.

As the owner/operator, I 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 schedule above. Should I not be able to implement any of the above items according to the schedule, I will contact NRCS or my Technical Service Provider and have the schedule revised.

Signature:_____ Date:_____

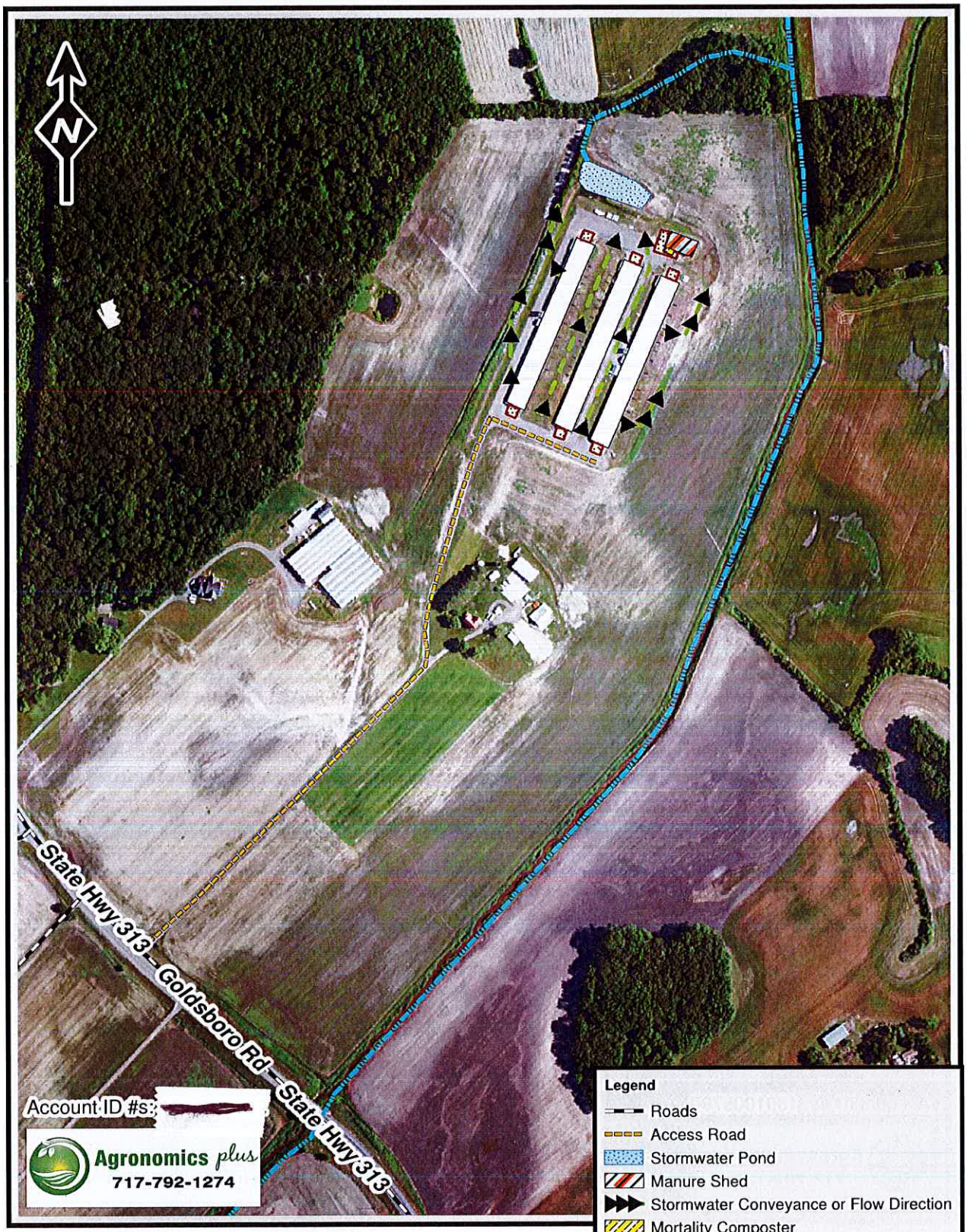
Name (*print*):_____

Alan Eck

MAE VUE Farm - Stormwater Conveyance Map

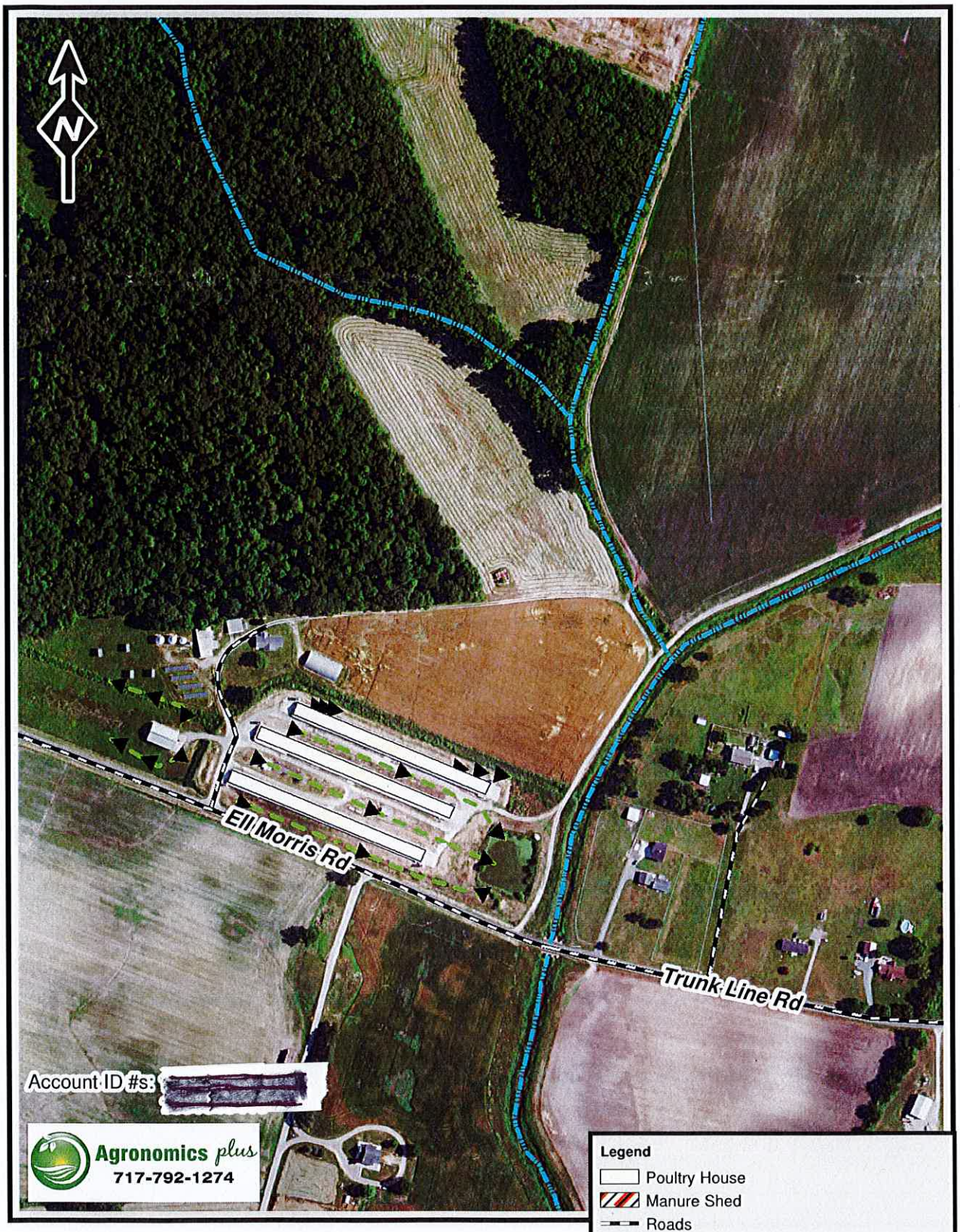
Alan Eck

Long Marsh Farm - Stormwater Conveyance Map



Alan Eck

Alan Eck (Ferrell) Farm - Stormwater Conveyance Map



CONSERVATION ELEMENT
FARMSTEAD (PRODUCTION AREA) & CROPLAND RECEIVING MANURE:

1. WATER CONVEYANCE MAP
2. PLAN MAPS
3. CONSERVATION PLANS includes soils descriptions AND SOIL LOSS CALCS