Revised 6/3/2025

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

RECEIVED
SEP - 8 2020
AFO DIVISION

General Information

AI Number: 67110

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

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)*: o 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:** 8381 Athol Road
City: Mardela Springs **State:** MD **Zip Code:** 21837

6. **Telephone Number(s) of Applicant:** (Hom[redacted]
(Cel[redacted]

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

Farm Information

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

8. **Farm Name:** ☐ Same as Legal Name
☒ Other *(please specify)*: William Calloway & Edward Calloway Farm

9. **Farm Address:** 8381 Athol Road
City: Mardela Springs **County:** Wicomico **Zip Code:** 21837

10. **Watershed/Hydrologic Unit Code (HUC)** (12-digit): 021303050198

11. **Latitude/Longitude of Production Area** (Deg/Min/Sec): ___-___-___ / ___-___-___
-75.7863 / 38.4250 Degrees

12. **Animal Information:**

A. Animal Type(s) *(from AFO size chart)*	B. Maximum Number of Animals *at any given time* *(For poultry, please indicate bird type and number per flock)*	C. Operation Size *(consult AFO size chart)*	D. Animal Confinement Type *(e.g. house, feedlot, barn, milking parlor, pen)*
Poultry	Broilers ~~164600~~ 156,800	Large	house

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

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

14. ***Combined square footage of *all* poultry houses:**
145000

15. ***Date(s) poultry houses constructed:**
1980 & 2004

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

Contact Information:
Phone No.: _____
Address: _____

Manure/Mortality Management

17. Total Manure/Litter/Wastewater generated *annually*: ~~1168~~ 1,113 *circle one:* (tons / lbs / gallons)

18. Total Manure/Litter/Wastewater transported offsite *annually*: 0 varies *circle one:* (tons / lbs / gallons)

19. **Total number of acres controlled by applicant available for land application of manure/litter/process wastewater: *Owned:* 463 *Leased:* 2416 + 294.4 → 2025 total acres as read from 2025 NMP 3173.4 acres

***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
shed	220 ton	solid
shed	481 ton	solid

21. Mortality Management Method:

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

CAFOs Only - Fees

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

Required Plan

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

Certification

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

Jeanette Calloway — 8/29/20

Signature of Applicant / duly authorized representative — **Date**

Jeanette Calloway — Partner

Printed Name of Applicant / duly authorized representative — **Title**

Calloway Brothers by Nancy Bp — 6/3/2025

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

COMPREHENSIVE NUTRIENT MANAGEMENT PLAN

FOR

William Calloway and Edward Calloway Farm

Calloway Brothers

LOCATION ADDRESS

8381 Athol Road

Mardela Springs, Maryland 21837

MAILING ADDRESS

8381 Athol Road

Mardela Springs, Maryland 21837

PREPARED BY

Wicomico Soil Conservation District

119 W. Naylor Mill Road Suite 6

Salisbury, MD 21801

Plan Date:

May 2025

COMPREHENSIVE NUTRIENT MANAGEMENT PLAN

William Calloway and Edward Calloway Farm

Calloway Brothers

8381 Athol Road

Mardela Springs, Maryland 21837

[redacted]

MAILING ADDRESS

8381 Athol Road

Mardela Springs, Maryland 21837

PREPARED IN COOPERATION WITH THE

Maryland Department of Agriculture
Office of Resource Conservation

AND THE

Wicomico Soil Conservation District

119 W.Naylor Mill Road Suite 6

Salisbury, MD 21801

Prepared by: Edward Silva

Plan Date: May 2025

Poultry Operation (Land Plan)

Concentrated Animal Feeding Operation (CAFO) M.D.E. Agency Interest **# 67110**

SECTION 1: CNMP Purpose and Agreement

The Comprehensive Nutrient Management Plan (CNMP) is an important part of the conservation management system (CMS) for your Animal Feeding Operation (AFO). This CNMP documents the planning decisions and operation and maintenance for the AFO. This plan has been prepared in accordance with NRCS standards and specifications for a Comprehensive Nutrient Management Plan 102.

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

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

Owner/Operator

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

Calloway Brothers

Tommy Pope

Calloway Brothers

5-30-25

Date

Certified Comphrensive Nutrient Management Plan (CNMP) Planner

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

Edward Silva

5-30-25

Date

Edward Silva
NRCS Planner Certified January 30, 2024
Nutrient Management Certification # 43577

SECTION 2: Farmstead (Production Area)

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

Farm Locations

Farm Name	Owner	Tax Account ID	Farm #	Tract #	Account ID Acres	Watershed
Beazer East	Koppers Co Inc	[redacted]	1482	306	29	02-13-03-01-0556
Beazer East	Koppers Co Inc	[redacted]	1482	306	18	02-13-03-01-0556
Beazer East	Koppers Co Inc	[redacted]	1482	306	21	02-13-03-01-0556
Beazer East	Koppers Co Inc	[redacted]	1482	306	14	02-13-03-01-0556
King Burnett	King Burnett	[redacted]	3039	5746	11.7	02-13-03-05-0581
King Burnett	King Burnett	[redacted]	3039	5746	24.8	02-13-03-05-0581
King Burnett	King Burnett	[redacted]	3039	5746	44.7	02-13-03-05-0581
Catlin	CATLIN WM H	[redacted]	4177	6502	17.1	02-13-03-05-0583
Catlin	VANDIVER CARROLL M	[redacted]	4178	6500	16.3	02-13-03-05-0583
Catlin	Ester Dwyer	[redacted]	4176	6503	16.8	02-13-03-05-0583
Catlin	John Parks	[redacted]	4175	6501	2	02-13-03-05-0583
Catlin	Steven White	[redacted]	4175	6501	6.7	02-13-03-05-0583
Dietz, Leonard	Leonard Dietz	[redacted]	3785	6113	29.5	02-13-03-05-0577
Home, Dougs	SBWC Holdings	[redacted]	4336	5167	28	02-13-03-05-0582
Home, Hunt Club	Calloway Brothers	[redacted]	2263	1085	74.6	02-13-03-05-0582
Morgan, William	William Morgan	[redacted]	244	1133	61	02-13-03-05-0577
Nashay, Frank	Angry Angels LLC	[redacted]	257	1146	70	02-13-03-05-0574
Palecheck, Bill	William Palecheck	[redacted]	3228	1797	96.2	02-13-03-08-0596
Palecheck, Bill	William Palecheck	[redacted]	3361	2579	18.6	02-13-03-08-0599
Palecheck, Bill	William Palecheck	[redacted]	3361	2579	100	02-13-03-08-0599

Phillips, B- Home	William Phillips	[redacted]	4041	6467	12.6	02-13-03-05-0574
Phillips, G-Paige	Michael Phillips	[redacted]	3737	234	49.6	02-13-03-05-0577
Phillips,M Home	Michael Phillips	[redacted]	3740	6069	22.5	02-13-03-05-0574
Phillips,M Home	Michael Phillips	[redacted]	3740	6069	229.5	02-13-03-05-0574
Phillips, M Twilley	Michael Phillips	[redacted]	3741	242	76.8	02-13-03-05-0574
Phillips, V Home	Virginia Phillips	[redacted]	3739	6068	102	02-13-03-05-0574
Phillips, V Twilley	Virginia Phillips	[redacted]	3739	239	102.5	02-13-03-05-0574
Reynolds, Will	Willard Reynolds	[redacted]	1230	1013	48.1	02-13-03-05-0577
Spear	Donald Spear	[redacted]	213	1102	21.9	02-13-03-05-0583
Spear	Donald Spear	[redacted]	213	1102	34000 sq. ft	02-13-03-05-0583
Twilley, Eric	Eric Twilley	[redacted]	4240	6536	50	02-13-03-01-0559
Wilson, Donald	Donald Wilson	[redacted]	263	1154	30.8	02-13-03-05-0574
Wilson, Donald	Nancy Wilson	[redacted]	263	1154	28.1	02-13-03-05-0574
Woglhman, G	FGW Associates	[redacted]	149	1032	22.4	02-13-03-05-0577
Woglhman, G	FGW Associates	[redacted]	149	1032	163.4	02-13-03-05-0577
Woglhman, G	Louis Stanovich	[redacted]	149	1032	14.1	02-13-03-05-0577
Home ,Poultry	Jeanette Calloway	[redacted]	3527	395	31	02-13-03-05-0577
Home , Poultry	Tami Brown	[redacted]	3527	395	2	02-13-03-05-0577
Home, Poultry	Jeanette Calloway	[redacted]	3527	395	13.4	02-13-03-05-0577
Home ,Poultry	Jeanette Calloway	[redacted]	3527	395	215.9	02-13-03-05-0577
Home ,Poultry	Jeanette Calloway	[redacted]	3527	395	66.1	02-13-03-05-0577
Phillips,M Home Right	Michael Phillips	[redacted]	3740	6071	229.5	02-13-03-05-0574
Phillips, M Home Right	Michael Phillips	[redacted]	3740	6071	50	02-13-03-05-0574
Reynolds, Will	Willard Reynolds	[redacted]	1230	1013	6.6	02-13-03-05-0577

Hales Luffman	Barbara Luffman	[redacted]	756	1695	29.9	02-13-03-01-0558
Hales Luffman	Barbara Luffman	[redacted]	756	1695	26.4	02-13-03-01-0558
Hales Luffman	Barbara Luffman	[redacted]	756	1695	4.4	02-13-03-01-0558
Hales Packing Shed	Donald Hales	[redacted]	1624	485	13.8	02-13-03-01-0558
Hales Packing Shed	Donald Hales	[redacted]	1624	485	59.9	02-13-03-01-0558
Hales Packing Shed	Donald Hales	[redacted]	1624	485	29.6	02-13-03-01-0558
Hales Packing Shed Left	Franklin Disharoon	[redacted]	3216	1662	10.9	02-13-03-05-0588
Hales Phillips	Salisbury 50 LLC	[redacted]	2778	810	26	02-13-03-01-0561
Hales Phillips	Salisbury 50 LLC	[redacted]	2778	810	5	02-13-03-01-0561
Hales Phillips	Salisbury 50 LLC	[redacted]	2778	810	5	02-13-03-01-0561
Hales Pusy Elton	Dale Cropper	[redacted]	1626	930	111.7	02-13-03-01-0558
Hales Tom Hall	Edward Johnson	[redacted]	1995	5094	40.14	02-13-03-01-0558
Hales Malone AG	Hales Property V LLC	[redacted]	4007	6312	106.7	02-13-03-01-0560
Hales Walmart	Philip Perdue	[redacted]	758	1554	83.4	02-13-03-01-0558
Hales Poly Watson	Paul Walston	[redacted]	1610	473	57	02-13-03-01-0562
Hales Poly Watson	Paul Walston	[redacted]	1610	473	2	02-13-03-01-0562
Hatton Faye	Faye Hatton	[redacted]	229	1118	20.7	02-13-03-05-0582
Hatton Faye	Chris Hatton	[redacted]	229	1118	13.5	02-13-03-05-0582
Hensley B	Bryan Hensley	[redacted]	1481	305	21.1	02-13-03-01-0556
Hensley B	Bryan Hensley	[redacted]	1481	305	27.4	02-13-03-01-0556

Hochmuth Bill	William Hochmuth	[redacted]	3138	5757	331.6	02-13-03-05-0583
Hochmuth Pat	William Hochmuth	[redacted]	3139	5758	331.6	02-13-03-05-0583
Home Bobby	William T Calloway ETAL	[redacted]	3596	1023	13.9	02-13-03-05-0582
Home Bobby	David Calloway	[redacted]	3596	1023	1.5	02-13-03-05-0575
Home Mary	Jeanette Calloway	[redacted]	3596	1024	13.9	02-13-03-05-0575
Home Mary	William T Calloway ETAL	[redacted]	3596	1024	14.4	02-13-03-05-0582
Home Lloyd	Jeanette Calloway	[redacted]	3527	2339	23.1	02-13-03-05-0575
Home Nans	Jeanette Calloway	[redacted]	3527	1119	69.3	02-13-03-05-0583
Home Tank Farm	Jeanette Calloway	[redacted]	3527	1022	52.8	02-13-03-05-0575
Johnson Upper Ferry	Allan Johnson	[redacted]	1484	308	11.3	02-13-03-01-0556
Johnson Upper Ferry	Allan Johnson	[redacted]	1484	308	10.4	02-13-03-01-0556
Johnson Upper Ferry	Allan Johnson	[redacted]	1484	308	10.4	02-13-03-01-0556
Kenny David	David Kenny	[redacted]	1463	6332	4.8	02-13-03-05-0583
Kenny David	David Kenny	[redacted]	1463	6332	14.8	02-13-03-05-0583
Moore Pat	John Bracey	[redacted]	256	1145	39.8	02-13-03-05-0577
Moore Pat	Sorkin & Bracey Enterprises LLC	[redacted]	256	1145	20.1	02-13-03-05-0577
Owens Sally	Marshall Wells	[redacted]	154	1037	32.2	02-13-03-05-0577
Owens Frances	Frances Owens	[redacted]	2529	5377	25.9	02-13-03-05-0577
Owens Frances	Frances Owens	[redacted]	2529	5377	4.0	02-13-03-05-0577
Palecheck Bill	Bill Palecheck	[redacted]	3227	1062	146.7	02-13-03-08-0596
Phillips Home	William Phillips	[redacted]	3738	6070	73.7	02-13-03-05-0574
Phillips Home	OSB Holdings LLC	[redacted]	3738	6070	14	02-13-03-05-0574
Phillips Home	OSB Holdings LLC	[redacted]	3738	6070	10.7	02-13-03-05-0574
Phillips B Tower	OSB Holdings LLC	[redacted]	3738	883	86.2	02-13-03-05-0574
Phillips B Tower	OSB Holdings LLC	[redacted]	3738	883	13.1	02-13-03-05-0574
Phillips G Nutters	Michael Phllips	[redacted]	3737	240	217.3	02-13-03-

	Trustee	[redacted]				05-0574
Phillips B Rockawalkin	Virginia Phillips LLC	[redacted]	3745	6016	160	02-13-03-05-0580
Phillips B Rockawalkin	George Phillips	[redacted]	3745	6016	10	02-13-03-01-0559
Plilchard Paige	Barbara Pilchard	[redacted]	1540	401	79.6	02-13-03-05-0577
Plilchard Paige	Barbara Pilchard	[redacted]	1540	401	28.3	02-13-03-05-0577
Saulsbury Jobys	Calloway Brothers	[redacted]	3706	6052	26.4	02-13-03-05-0577
Saulsbury Sandra	Sandra Saulsbury	[redacted]	3965	5601	24	02-13-03-05-0583
Sheman Louise	Louise Sheman	[redacted]	1532	1532	18.7	02-13-03-05-0583
Shiles April	April Shiles	[redacted]	3242	1135	24.9	02-13-03-05-0577
Shockley	Roy Beauchamp	[redacted]	190	1075	22.5	02-13-03-05-0584
Shockley	Faye Smith	[redacted]	190	1075	51.8	02-13-03-05-0584
Shockley	Faye Smith	[redacted]	190	1075	1.5	02-13-03-05-0584
Shockley	Robert Atkinson	[redacted]	190	1075	96.3	02-13-03-05-0584
Todd	H. Todd	[redacted]	243	1132	57.8	02-13-03-05-0577
Wang Henry	Jack Wang	[redacted]	3528	1081	119.8	02-13-03-05-0583
Wang Henry	Delmarva Power	[redacted]	3528	1081	28.5	02-13-03-05-0583
Webster P	Brad Webster	[redacted]	1510	353	143	02-13-03-05-0582
White Taylor	Taylor White	[redacted]	437	1327	104.7	02-13-03-01-0556
Wilson S	Veronica Wilson	[redacted]	2396	5299	5.8	02-13-03-05-0583
Wilson S	Veronica Wilson	[redacted]	2396	5299	2.4	02-13-03-05-0583

Description of Operation / Additional Information

Calloway Brothers is a poultry, grain and vegetable operation in Mardela Springs, Maryland. They operate approximately 3173.4 acres of cropland in Maryland. The poultry houses operated by Calloway Brothers are The William Calloway Farm, 3 houses with a total capacity of 91,400 birds and The Edward Calloway Farm, 3 houses with a capacity of 65,400 birds. The Calloway Brothers also imported poultry manure litter from the Pat Moore ,Tommy & Dee and Double T Farms of Mardela Springs for use as a nutrient source for crops in 2025.

Sensitive Environmental Information

Name of nearest regulatory waterbody	Distance to nearest regulatory waterbody (ft.)	Distance to nearest regulatory wetland (ft.)
Ingem Gut	1680'	110'

Account ID	12 Digit Watershed	Watershed Name	Tier II High Quality Waters Watershed	Impairments			
				Nitrogen	Phosphorus	Bacteria (e.coli, enterocci or fecal)	Sediment
[redacted]	02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
	02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
	02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
	02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
	02-13-03-05-0581	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-0581	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-0581	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
	02-13-03-05-						

0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-08-0596	Transquaking River	No	Yes	Yes	Yes	No
02-13-03-08-0599	Transquaking River	No	Yes	Yes	Yes	No
02-13-03-08-0599	Transquaking River	No	Yes	Yes	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
02-13-03-01-0559	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No

[redacted]	02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0584	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0584	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0584	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0584	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes

02-13-03-05-0588	Nanticoke River	No	No	Yes	Yes	No
02-13-03-01-0561	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0561	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0561	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0560	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0558	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0562	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-01-0562	Lower Wicomico River	No	Yes	Yes	Yes	Yes
02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0575	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0575	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0582	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0575	Nanticoke River	No	No	No	Yes	No
02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
02-13-03-05-0575	Nanticoke River	No	No	No	Yes	No
02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
02-13-03-01-0556	Lower Wicomico River	No	Yes	Yes	Yes	No
02-13-03-01-	Lower	No	Yes	Yes	Yes	No

[redacted]	0556	Wicomico River					
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-08-0596	Transquaking River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-05-0580	Nanticoke River	No	Yes	Yes	Yes	No
[redacted]	02-13-03-01-0559	Lower Wicomico River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0583	Nanticoke River	No	Yes	Yes	Yes	Yes
[redacted]	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No

[redacted]	02-13-03-05-0574	Nanticoke River	No	Yes	Yes	Yes	No
	02-13-03-05-0577	Nanticoke River	No	No	No	Yes	No

Animal Production

Poultry

Bird Type	Average Bird Weight (lbs)	Number of Houses	Total Number of Birds (All Houses)	Number of Flocks per year
Broiler	7	3	91,400,(William Farm)	5
Broiler	7	3	65,400,(Edward Farm)	5

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

Operators must keep records of the actual:

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

Manure Collection

Crust out occurs between the flocks per year, with approximately 40% of litter and crust removed. The remainder is windrowed in the houses. Full cleanout is scheduled every ten years. Plans to windrow after each flock. The next expected cleanout is in 2028.

Manure Storage

All poultry manure will either remain in the poultry house or will be stored in the designated storage facility. A minor amount of manure will be used in the animal mortality facility to facilitate the composting process.

Current / Proposed Manure Storage Conditions

Animal Type	Storage Structure	Size of Storage Structure	Storage Capacity	Date Constructed
Poultry	The William Calloway Farm, PWSS	40'x60'	12,000 cf	4/25/2007
Poultry	The Edward Calloway Farm, PWSS	40'x130'	26,000 cf	1/15/1999

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

Transfer Information (Farm(s) receiving exported manure)

Animal Type	Name	Address
Poultry	Calloway Brothers	8381 Athol Road, Mardela Springs, Maryland 21837

Animal Mortality Disposal

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

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

Methods for managing mortality include:

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

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

Typical Mortality Management

Current Normal Mortality Disposal Method(s)

Animal Type	Disposal Method	Number of Bins/Capacity	Location of Disposal/Facility
Poultry	Composting - Bins/Channels	2 Channel	The William Calloway Farm
Poultry	Composting - Bins/Channels	Bin Composter	The Edward Calloway Farm

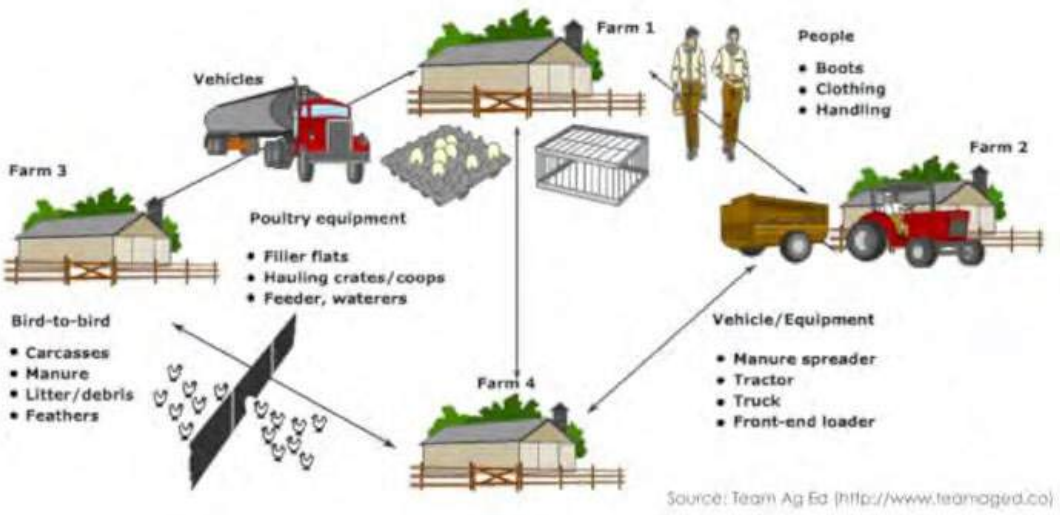
Catastrophic Mortality Management

In the event of catastrophic mortality, the operator will contact the integrator and most likely, follow an 'in house' or 'in PWSS' windrow method of composting as outlined in UMD-Ext fact sheets #723 and #801. If ‘in PWSS’ composting is used, MDE must be notified for approval.

Biosecurity

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

How Diseases Spread (Example - Poultry Operation)



Steps to Take to Avoid Disease Spread

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

1. Permit only essential workers and vehicles on the premises.
2. Give germs the boot
    a. Keep a pair of shoes or boots to wear only around your animals.
    b. Clean and disinfect your shoes often.
    c. Always ask visitors and employees to clean their boots and shoes.
3. Don't haul home disease
    a. Always clean and disinfect vehicles used for moving animals.
    b. Limit traffic of incoming people, products and vehicles that could bring in a disease.
    c. Clean and disinfect all equipment that comes in contact with your animals.
4. Keep your farm secure
    a. Restrict access to your property and animals.
    b. Keep doors and gates locked.
    c. Have tracking records on animals.
    d. Give germs space - Newly acquired animals should be isolated for at least two weeks to ensure you don't introduce disease to your main herd or flock. As an added protection, isolate and quarantine new animals for 30 days before putting them with your other animals. Keep show animals segregated for at least two weeks after they've been to a fair or exhibit.
5. Look for signs
    a. Unusual animal health symptoms or behavior
    b. Sudden, unexplained death loss in the herd or flock
    c. Severe illness affecting a high percentage of animals
    d. Blisters around an animal's mouth, nose, teats or hooves
    e. Staggering, falling or central nervous system disorders that prevent animals from rising or walking normally.
    f. Large number of dead insects, rodents or wildlife
6. Don't wait - call in signs of disease immediately. Do not self-diagnose. Seek veterinary services, as early detection is your best protection. If you have animals with signs of suspect disease, call your local veterinarian, UMD extension agent () or the state veterinarian. Rapid response and investigation are the only ways to control and eliminate disease and stop large numbers of casualties or damage to our economic system.

Farm Contact Information

The following tables contain important contact information specific to this CNMP for Calloway Brothers.

Emergency Contact Information

Farm Name	William Calloway and Edward Calloway Farm
Farm Address	8381 Athol Road, Mardela Springs, Maryland 21837
Mailing Address	8381 Athol Road, Mardela Springs, Maryland 21837
Directions to the farm	From Rt 50 East toward Salisbury, take the Mardela Springs exit, continue on Main Street to Bridge Street. Turn right then make right onto Athol Rd. and continue 3 miles to farm , on left just past Baptist Church Road.

Farm Contacts

	Name	Farm Phone	Cell Phone
Farm Owner	Jeanette Calloway		[redacted]
Farm Operator	Calloway Brothers		
Fire or Ambulance	911		

State Agency Contacts

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

Wicomico County Agency Contacts

	Day Phone	Emergency Number
MDA Regional Nutrient Management (Region)	410-546-4777 x3	410-546-4777 x3
Health Department		
Sherriff's Office		
University of Maryland Extension Office (Salisbury)	410-546-4777 x3	410-546-4777 x3

Integrator Information

Name	Address	Phone
Perdue Farms, Inc.	517 W Main St, Salisbury MD 21801	800-473-7383

WICOMICO COUNTY SERVICE CENTER
2322B GODDARD PKWY
SALISBURY, MD 21801-1126
(410) 546-4777

Conservation Plan

CALLOWAY BROTHERS
8381 ATHOL RD
MARDELA SPRINGS, MD 21837

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: 395

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
1	2.1 Ac	04	2026	--	--
11	24.6 Ac	04	2026	--	--
12	2.3 Ac	04	2026	--	--
13	1.1 Ac	04	2026	--	--
14	1.8 Ac	04	2026	--	--
15	0.9 Ac	04	2026	--	--
16	2.3 Ac	04	2026	--	--
17	0.6 Ac	04	2026	--	--
18	8.7 Ac	04	2026	--	--
19	16.0 Ac	04	2026	--	--
2	5.4 Ac	04	2026	--	--
20	31.6 Ac	04	2026	--	--
21	0.2 Ac	04	2026	--	--
22	6.0 Ac	04	2026	--	--
23	9.3 Ac	04	2026	--	--
25	1.2 Ac	04	2026	--	--
26	8.6 Ac	04	2026	--	--
27	7.2 Ac	04	2026	--	--
3	10.8 Ac	04	2026	--	--
30	1.6 Ac	04	2026	--	--
4	0.6 Ac	04	2026	--	--
5	2.1 Ac	04	2026	--	--
6	14.8 Ac	04	2026	--	--
7	14.2 Ac	04	2026	--	--
8	12.9 Ac	04	2026	--	--
9	8.3 Ac	04	2026	--	--

Cover Crop (340)

Cover crop - Plant grasses, legumes and forbs for seasonal vegetative cover where seasonal cover will protect or improve natural resources.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.1 Ac	09	2026	--	--
11	24.6 Ac	09	2026	--	--
12	2.3 Ac	09	2026	--	--
13	1.1 Ac	09	2026	--	--
14	1.8 Ac	09	2026	--	--
15	0.9 Ac	09	2026	--	--
16	2.3 Ac	09	2026	--	--
17	0.6 Ac	09	2026	--	--
18	8.7 Ac	09	2026	--	--
19	16.0 Ac	09	2026	--	--
2	5.4 Ac	09	2026	--	--
20	31.6 Ac	09	2026	--	--
21	0.2 Ac	09	2026	--	--
22	6.0 Ac	09	2026	--	--
23	9.3 Ac	09	2026	--	--
25	1.2 Ac	09	2026	--	--
26	8.6 Ac	09	2026	--	--
27	7.2 Ac	09	2026	--	--
3	10.8 Ac	09	2026	--	--
30	1.6 Ac	09	2026	--	--
4	0.6 Ac	09	2026	--	--
5	2.1 Ac	09	2026	--	--
6	14.8 Ac	09	2026	--	--
7	14.2 Ac	09	2026	--	--
8	12.9 Ac	09	2026	--	--
9	8.3 Ac	09	2026	--	--

Nutrient Management (590)

Basic NM - Implement a basic Nutrient Management Plan which includes the 4Rs (right source, rate, time, place) to benefit plant productivity while also reducing off-site movement of nutrients.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.1 Ac	04	2026	--	--
11	24.6 Ac	04	2026	--	--
12	2.3 Ac	04	2026	--	--
13	1.1 Ac	04	2026	--	--
14	1.8 Ac	04	2026	--	--
15	0.9 Ac	04	2026	--	--
16	2.3 Ac	04	2026	--	--
17	0.6 Ac	04	2026	--	--
18	8.7 Ac	04	2026	--	--
19	16.0 Ac	04	2026	--	--
2	5.4 Ac	04	2026	--	--
20	31.6 Ac	04	2026	--	--
21	0.2 Ac	04	2026	--	--
22	6.0 Ac	04	2026	--	--
23	9.3 Ac	04	2026	--	--
25	1.2 Ac	04	2026	--	--
26	8.6 Ac	04	2026	--	--
27	7.2 Ac	04	2026	--	--
3	10.8 Ac	04	2026	--	--
30	1.6 Ac	04	2026	--	--
4	0.6 Ac	04	2026	--	--
5	2.1 Ac	04	2026	--	--
6	14.8 Ac	04	2026	--	--
7	14.2 Ac	04	2026	--	--
8	12.9 Ac	04	2026	--	--
9	8.3 Ac	04	2026	--	--

Residue and Tillage Management, Reduced Till (345)

Reduced tillage - Minimize soil disturbance by reducing the number and type of yearly tillage operations to manage the amount, orientation and distribution of crop and plant residues.

Field	Planned Amount	Month	Year	Applied Amount	Date
1	2.1 Ac	04	2026	--	--
11	24.6 Ac	04	2026	--	--
12	2.3 Ac	04	2026	--	--
13	1.1 Ac	04	2026	--	--
14	1.8 Ac	04	2026	--	--
15	0.9 Ac	04	2026	--	--
16	2.3 Ac	04	2026	--	--
17	0.6 Ac	04	2026	--	--
18	8.7 Ac	04	2026	--	--
19	16.0 Ac	04	2026	--	--
2	5.4 Ac	04	2026	--	--
20	31.6 Ac	04	2026	--	--
21	0.2 Ac	04	2026	--	--
22	6.0 Ac	04	2026	--	--
23	9.3 Ac	04	2026	--	--
25	1.2 Ac	04	2026	--	--
26	8.6 Ac	04	2026	--	--
27	7.2 Ac	04	2026	--	--
3	10.8 Ac	04	2026	--	--
30	1.6 Ac	04	2026	--	--
4	0.6 Ac	04	2026	--	--
5	2.1 Ac	04	2026	--	--
6	14.8 Ac	04	2026	--	--
7	14.2 Ac	04	2026	--	--
8	12.9 Ac	04	2026	--	--
9	8.3 Ac	04	2026	--	--

Farmstead

Tract: 395

Animal Mortality Facility (316)

Composting - Construct an on-farm mortality composting facility for the treatment or disposal of animal carcasses due to routine mortality.

Field	Planned Amount	Month	Year	Applied Amount	Date
29	1.00 No	11	1992	1.00 No	12/26/1993
28	1.00 No	12	2006	1.00 No	04/25/2007

Comprehensive Nutrient Management Plan - Written (102)

Utilize a certified Technical Service Provider (TSP) to develop a Comprehensive Nutrient Management Plan that addresses the handling, storage, and application of animal waste in an environmentally safe manner.

Field	Planned Amount	Month	Year	Applied Amount	Date
28	1.00 No	06	2026	1	5/30/2025

Heavy Use Area Protection (561)

Stabilization - Stabilize or protect an intensively used area.

Field	Planned Amount	Month	Year	Applied Amount	Date
28	1600.00 SqFt	09	2009	1600.00 SqFt	04/23/2010
28	1600.00 SqFt	09	2009	1600.00 SqFt	04/23/2010
28	1600.00 SqFt	09	2009	1600.00 SqFt	04/23/2010
29	1600.00 SqFt	09	2009	1600.00 SqFt	04/23/2010
29	1600.00 SqFt	09	2009	1600.00 SqFt	04/23/2010
28	2000.00 SqFt	09	2015	2000.00 SqFt	06/10/2016
29	1600.00 SqFt	05	2026		
29	1600.00 SqFt	05	2026		
29	1600.00 SqFt	05	2026		
29	1600.00 SqFt	05	2026		

Waste Storage Facility (313)

Waste Storage Facility - Make an agricultural waste storage impoundment or containment by constructing an embankment, excavating a pit or dugout, or by fabricating a structure. **PWSS built 3/10/87 is not in use for manure storage at this time.**

Field	Planned Amount	Month	Year	Applied Amount	Date
29	1.00 No	03	1987	1.00 No	03/10/1987
29	1.00 No	02	1998	1.00 No	01/15/1999
28	1.00 No	12	2006	1.00 No	04/25/2007

Windbreak/Shelterbelt Establishment (380)

Establishment - Plant trees/shrubs in linear configurations to meet conservation objectives.

Field	Planned Amount	Month	Year	Applied Amount	Date
28	675.00 Ft	01	2008	675.00 Ft	05/12/2008

Forest

Tract: 395

Forest Stand Improvement (666)

Forest Stand Improvement - Treat species composition, stand structure or density by cutting or killing selected trees or understory vegetation to achieve desired forest conditions or obtain ecosystem services.

Field	Planned Amount	Month	Year	Applied Amount	Date
WDS	26.6 Ac	04	2026	--	--
WDS2	32.7 Ac	04	2026	--	--
WDS3	15.4 Ac	04	2026	--	--
WDS4	15.7 Ac	04	2026	--	--

CERTIFICATION OF PARTICIPANTS

Calloway Brothers	5/30/25
CALLOWAY BROTHERS	DATE

CERTIFICATION OF:

	5-30-25
CERTIFIED PLANNER	DATE

CONSERVATION DISTRICT	
	5/30/2025
WICOMICO SCD	DATE

NRCS	
DISTRICT CONSERVATIONIST	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

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USDA Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW.
Washington, DC 20250-9410

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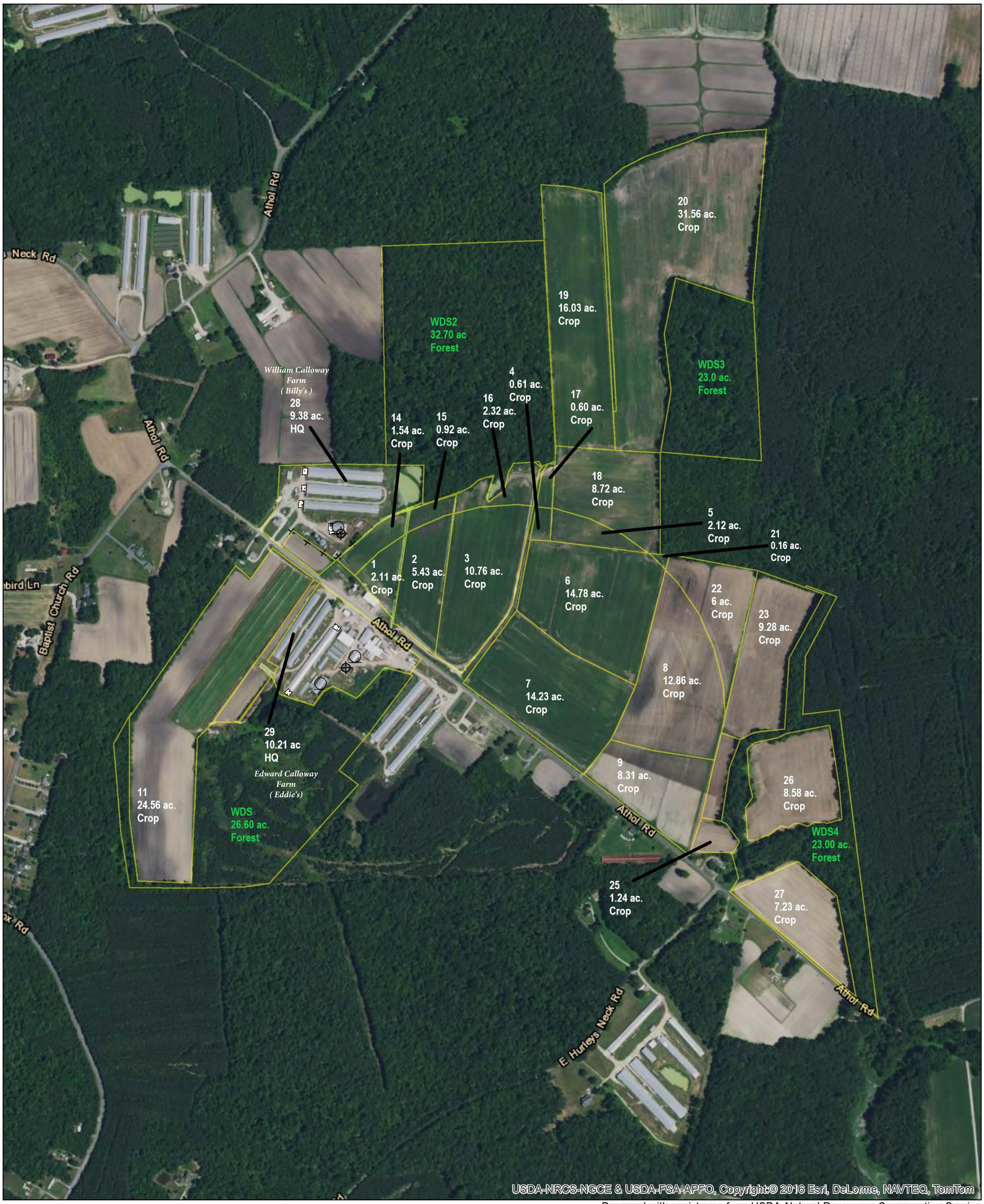
Date: 10/30/2020

Conservation Plan Map

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 320.07
OPID 03004 Tract # 395

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD



Prepared with assistance from USDA-Natural Resources Conservation Service

0 660
Feet

Practice Schedule PLUs

Conservation Practice Lines

+ + Windbreak/Shelterb... Establishment (380)

Conservation Practice Points

Waste Storage Facility (313)

Animal Mortality Facility (316)

Conservation Practice Polygons

Heavy Use Area Protection (561)

Proposed Heavy Use Area Protection (561)

N

USDA

USDA is an equal opportunity provider, employer, and lender

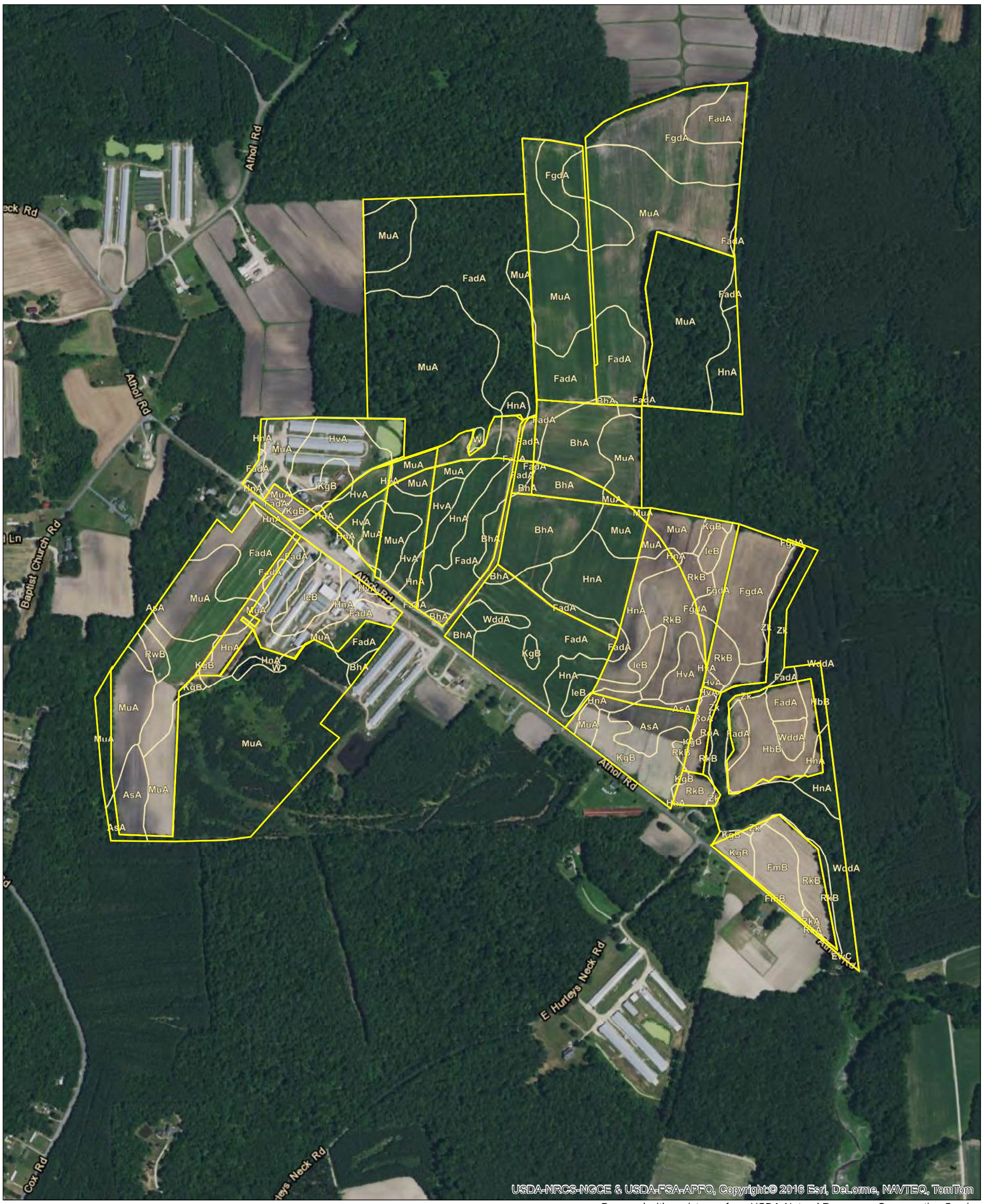
Date: 10/30/2020

Soils Map

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 320.07

OPID 03004 Tract #395

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD



Prepared with assistance from USDA-Natural Resources Conservation Service

0 660
Feet

Practice Schedule PLUs

Soils

Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Map Unit Description (Brief, Generated)

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, provide information on the composition of map units and properties of their components.

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.

Report—Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map Unit: AsA--Askecksy loamy sand, 0 to 2 percent slopes

Component: Askecksy, undrained (45%)

The Askecksy, undrained 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 sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches (or restricted depth) is low. 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 2 inches) during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Below this thin organic horizon the organic matter content is about 1 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Component: Askecksy, drained (30%)

The Askecksy, drained 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 sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches (or restricted depth) is very low. 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 1 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Hurlock, undrained (10%)

Generated brief soil descriptions are created for major soil components. The Hurlock, undrained soil is a minor component.

Component: Mullica, undrained (5%)

Generated brief soil descriptions are created for major soil components. The Mullica, undrained soil is a minor component.

Component: Galloway (5%)

Generated brief soil descriptions are created for major soil components. The Galloway soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Map Unit: BhA--Berryland mucky loamy sand, 0 to 2 percent slopes

Component: Berryland, drained (50%)

The Berryland, drained component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches (or restricted depth) is low. 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 11 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil meets hydric criteria.

Component: Berryland, undrained (30%)

The Berryland, undrained component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches (depth from the mineral surface is 0 inches) during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Below this thin organic horizon the organic matter content is about 11 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Component: Klej (10%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Component: Galloway (5%)

Generated brief soil descriptions are created for major soil components. The Galloway soil is a minor component.

Component: Corsica, drained (5%)

Generated brief soil descriptions are created for major soil components. The Corsica, drained soil is a minor component.

Map Unit: EwC--Evesboro sand, 5 to 10 percent slopes

Component: Evesboro (75%)

The Evesboro component makes up 75 percent of the map unit. Slopes are 5 to 10 percent. This component is on knolls, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive

layer is high. Available water to a depth of 60 inches (or restricted depth) 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 0 percent. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Runclint (10%)

Generated brief soil descriptions are created for major soil components. The Runclint soil is a minor component.

Component: Galloway (5%)

Generated brief soil descriptions are created for major soil components. The Galloway soil is a minor component.

Component: Fort Mott (5%)

Generated brief soil descriptions are created for major soil components. The Fort Mott soil is a minor component.

Component: Cedartown (5%)

Generated brief soil descriptions are created for major soil components. The Cedartown soil is a minor component.

Map Unit: FadA--Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area

Component: Fallsington, undrained (48%)

The Fallsington, undrained component makes up 48 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 high. 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 (27%)

The Fallsington, drained component makes up 27 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 high. 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. Irrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Woodstown (9%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Component: Hammonton (8%)

Generated brief soil descriptions are created for major soil components. The Hammonton soil is a minor component.

Component: Othello (8%)

Generated brief soil descriptions are created for major soil components. The Othello soil is a minor component.

Map Unit: FgdA--Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area

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%)

The Fallsington, drained component makes up 37 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 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. There are no saline horizons within 30 inches of the soil surface.

Component: Woodstown (9%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Component: Hammonton (8%)

Generated brief soil descriptions are created for major soil components. The Hammonton soil is a minor component.

Component: Othello (8%)

Generated brief soil descriptions are created for major soil components. The Othello soil is a minor component.

Map Unit: FmB--Fort Mott loamy sand, 2 to 5 percent slopes

Component: Fort Mott (80%)

The Fort Mott component makes up 80 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of Sandy eolian deposits over fluviomarine sediments fluviomarine deposits. 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 (or restricted depth) 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 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Downer (5%)

Generated brief soil descriptions are created for major soil components. The Downer soil is a minor component.

Component: Runclint (5%)

Generated brief soil descriptions are created for major soil components. The Runclint soil is a minor component.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major soil components. The Ingleside soil is a minor component.

Component: Rosedale (5%)

Generated brief soil descriptions are created for major soil components. The Rosedale soil is a minor component.

Map Unit: HbB--Hambrook sandy loam, 2 to 5 percent slopes

Component: Hambrook (80%)

The Hambrook component makes up 80 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 (or restricted depth) 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 2 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Cedartown (5%)

Generated brief soil descriptions are created for major soil components. The Cedartown soil is a minor component.

Component: Sassafras (5%)

Generated brief soil descriptions are created for major soil components. The Sassafras soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major soil components. The Hammonton 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 flats, shallow depressions, 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 moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) 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 soil components. The Klej soil is a minor component.

Component: Hurlock, drained (5%)

Generated brief soil descriptions are created for major soil components. The Hurlock, drained soil is a minor component.

Component: Rosedale (5%)

Generated brief soil descriptions are created for major soil components. The Rosedale soil is a minor component.

Component: Ingleside (5%)

Generated brief soil descriptions are created for major soil components. The Ingleside 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 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 (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. 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 (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. Below this thin organic horizon the organic matter content is about 2 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Mullica, drained (5%)

Generated brief soil descriptions are created for major soil components. The Mullica, drained soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major soil components. The Hammonton soil is a minor component.

Map Unit: IeB--Ingleside loamy sand, 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 flats, uplands. 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 (or restricted depth) 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: Downer (5%)

Generated brief soil descriptions are created for major soil components. The Downer soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major soil components. The Hammonton soil is a minor component.

Component: Cedartown (5%)

Generated brief soil descriptions are created for major soil components. The Cedartown soil is a minor component.

Component: Evesboro (5%)

Generated brief soil descriptions are created for major soil components. The Evesboro soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Map Unit: KgB--Klej-Galloway complex, 0 to 5 percent slopes

Component: Klej (45%)

The Klej component makes up 45 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during February. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria.

Component: Galloway (35%)

The Galloway component makes up 35 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 (or restricted depth) 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 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Askecksy, drained (5%)

Generated brief soil descriptions are created for major soil components. The Askecksy, drained soil is a minor component.

Component: Runclint (5%)

Generated brief soil descriptions are created for major soil components. The Runclint soil is a minor component.

Component: Hurlock, drained (5%)

Generated brief soil descriptions are created for major soil components. The Hurlock, drained soil is a minor component.

Component: Berryland, drained (5%)

Generated brief soil descriptions are created for major soil components. The Berryland, drained soil is a minor component.

Map Unit: MuA--Mullica-Berryland complex, 0 to 2 percent slopes

Component: Mullica, drained (26%)

The Mullica, drained component makes up 26 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy and loamy 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 high. Available water to a depth of 60 inches (or restricted depth) is low. 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 16 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil meets hydric criteria.

Component: Berryland, drained (24%)

The Berryland, drained component makes up 24 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches (or restricted depth) is low. 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 11 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil meets hydric criteria.

Component: Mullica, undrained (16%)

The Mullica, undrained component makes up 16 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy and loamy 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 high. 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 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 66 percent. Below this thin organic horizon the organic matter content is about 16 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Component: Berryland, undrained (14%)

The Berryland, undrained component makes up 14 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches (depth from the mineral surface is 0 inches) during January, February, March, April. Organic matter content in the surface horizon is about 68 percent. Below this thin organic horizon the organic matter content is about 11 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Component: Klej (10%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Component: Galloway (5%)

Generated brief soil descriptions are created for major soil components. The Galloway soil is a minor component.

Component: Askecksy, drained (5%)

Generated brief soil descriptions are created for major soil components. The Askecksy, drained soil is a minor component.

Map Unit: RkA--Rockawalkin loamy sand, 0 to 2 percent slopes

Component: Rockawalkin (75%)

The Rockawalkin component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy 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 (or restricted depth) 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 1 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Pepperbox (10%)

Generated brief soil descriptions are created for major soil components. The Pepperbox soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Component: Runclint (5%)

Generated brief soil descriptions are created for major soil components. The Runclint soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Map Unit: RkB--Rockawalkin loamy sand, 2 to 5 percent slopes

Component: Rockawalkin (75%)

The Rockawalkin component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of sandy 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 (or restricted depth) 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 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Pepperbox (10%)

Generated brief soil descriptions are created for major soil components. The Pepperbox soil is a minor component.

Component: Woodstown (5%)

Generated brief soil descriptions are created for major soil components. The Woodstown soil is a minor component.

Component: Runclint (5%)

Generated brief soil descriptions are created for major soil components. The Runclint soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Map Unit: RoA--Rosedale loamy sand, 0 to 2 percent slopes

Component: Rosedale (75%)

The Rosedale component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits over fluviomarine deposits. 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 (or restricted depth) is low. 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 2s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Component: Evesboro (10%)

Generated brief soil descriptions are created for major soil components. The Evesboro soil is a minor component.

Component: Hambrook (5%)

Generated brief soil descriptions are created for major soil components. The Hambrook soil is a minor component.

Component: Galloway (5%)

Generated brief soil descriptions are created for major soil components. The Galloway soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Map Unit: RwB--Runclint-Cedartown complex, 2 to 5 percent slopes

Component: Runclint (45%)

The Runclint component makes up 45 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or sandy fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. 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 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Component: Cedartown (40%)

The Cedartown component makes up 40 percent of the map unit. Slopes are 2 to 5 percent. This component is on intermingled flats, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. 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 3s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Component: Evesboro (5%)

Generated brief soil descriptions are created for major soil components. The Evesboro soil is a minor component.

Component: Klej (5%)

Generated brief soil descriptions are created for major soil components. The Klej soil is a minor component.

Component: Galloway (5%)

Generated brief soil descriptions are created for major soil components. The Galloway 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: WddA--Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Component: Woodstown (80%)

The Woodstown component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, 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 moderately well drained. Water movement in the most restrictive layer is moderately high. 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 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. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Fallsington (6%)

Generated brief soil descriptions are created for major soil components. The Fallsington soil is a minor component.

Component: Hammonton (6%)

Generated brief soil descriptions are created for major soil components. The Hammonton soil is a minor component.

Component: Hambrook (4%)

Generated brief soil descriptions are created for major soil components. The Hambrook soil is a minor component.

Component: Mattapex (4%)

Generated brief soil descriptions are created for major soil components. The Mattapex soil is a minor component.

Map Unit: Zk--Zekiah silt loam, frequently flooded

Component: Zekiah (80%)

The Zekiah component makes up 80 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, , 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 (or restricted depth) 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 4 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: Longmarsh (10%)

Generated brief soil descriptions are created for major soil components. The Longmarsh soil is a minor component.

Component: Hammonton (5%)

Generated brief soil descriptions are created for major soil components. The Hammonton soil is a minor component.

Component: Hurlock (5%)

Generated brief soil descriptions are created for major soil components. The Hurlock soil is a minor component.

Data Source Information

Soil Survey Area: Wicomico County, Maryland

Survey Area Data: Version 15, Jun 11, 2020

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	1	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.1	5%
395	1	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.9	43%
395	1	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	1.1	52%
			Total	**2.1**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	11	AsA	Askecksy loamy sand, 0 to 2 percent slopes	2.3	9%
395	11	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	4.5	18%
395	11	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.4	2%
395	11	KgB	Klej-Galloway complex, 0 to 5 percent slopes	3.8	15%
395	11	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	12.3	50%
395	11	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	0.4	2%
395	11	RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	0.9	4%
			Total	**24.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	12	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.4	17%
395	12	HnA	Hammonton sandy loam, 0 to 2 percent slopes	1.3	57%
395	12	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.1	4%
395	12	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.5	22%
			Total	**2.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	13	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.2	20%
395	13	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.2	20%
395	13	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.4	40%
395	13	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.2	20%
			Total	**1.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	14	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.1	5%
395	14	HvA	Hurlock sandy loam, 0 to 2 percent slopes	1.7	89%
395	14	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.1	5%
			Total	**1.9**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	15	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.0	0%
395	15	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.9	100%
			Total	**0.9**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	16	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
395	16	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.8	35%
395	16	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	1.5	65%
395	16	W	Water	0.0	0%
			Total	**2.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	17	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.6	100%
395	17	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.0	0%
			Total	**0.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	18	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	4.4	51%
395	18	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	1.2	14%
395	18	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	3.1	36%
			Total	**8.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	19	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	0.0	0%
395	19	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	6.8	43%
395	19	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	2.6	16%
395	19	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	6.5	41%
			Total	**15.9**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	2	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
395	2	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.6	11%
395	2	HvA	Hurlock sandy loam, 0 to 2 percent slopes	2.2	41%
395	2	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	2.6	48%
			Total	**5.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	20	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	0.1	0%
395	20	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	7.0	22%
395	20	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	9.6	30%
395	20	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	14.8	47%
			Total	**31.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	21	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.2	100%
			Total	**0.2**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	22	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	1.4	23%
395	22	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.1	2%
395	22	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.0	0%
395	22	IeB	Ingleside loamy sand, 2 to 5 percent slopes	0.8	13%
395	22	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.5	8%
395	22	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	1.8	30%
395	22	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	1.4	23%
			Total	**6.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	23	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	6.1	66%
395	23	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.3	3%
395	23	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	1.3	14%
395	23	Zk	Zekiah silt loam, frequently flooded	1.6	17%
			Total	**9.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	25	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.0	0%
395	25	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.1	8%
395	25	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	1.0	83%
395	25	Zk	Zekiah silt loam, frequently flooded	0.1	8%
			Total	**1.2**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	26	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	2.3	26%
395	26	HbB	Hambrook sandy loam, 2 to 5 percent slopes	4.7	54%
395	26	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.4	5%
395	26	WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	1.0	11%
395	26	Zk	Zekiah silt loam, frequently flooded	0.3	3%
			Total	**8.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	27	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	3.0	42%
395	27	KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.1	15%
395	27	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0.2	3%
395	27	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	2.8	39%
395	27	Zk	Zekiah silt loam, frequently flooded	0.1	1%
			Total	**7.2**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	28	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.5	5%
395	28	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.3	3%
395	28	HvA	Hurlock sandy loam, 0 to 2 percent slopes	4.5	42%
395	28	KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.5	14%
395	28	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	3.8	36%
			Total	**10.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	29	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	2.1	20%
395	29	HnA	Hammonton sandy loam, 0 to 2 percent slopes	4.6	45%
395	29	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.1	1%
395	29	IeB	Ingleside loamy sand, 2 to 5 percent slopes	3.1	30%
395	29	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.4	4%
			Total	**10.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	3	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	1.2	11%
395	3	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	4.3	40%
395	3	HnA	Hammonton sandy loam, 0 to 2 percent slopes	3.2	30%
395	3	HvA	Hurlock sandy loam, 0 to 2 percent slopes	1.2	11%
395	3	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.8	7%
			Total	**10.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	30	AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.0	0%
395	30	HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.1	7%
395	30	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.0	0%
395	30	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	0.7	47%
395	30	RoA	Rosedale loamy sand, 0 to 2 percent slopes	0.6	40%
395	30	Zk	Zekiah silt loam, frequently flooded	0.1	7%
			Total	**1.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	4	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	0.1	17%
395	4	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.5	83%
			Total	**0.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	5	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	1.9	90%
395	5	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
395	5	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.2	10%
			Total	**2.1**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	6	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	5.8	39%
395	6	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	1.5	10%
395	6	HnA	Hammonton sandy loam, 0 to 2 percent slopes	5.3	36%
395	6	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	2.1	14%
			Total	**14.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	7	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	1.1	8%
395	7	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	8.9	62%
395	7	HnA	Hammonton sandy loam, 0 to 2 percent slopes	2.0	14%
395	7	IeB	Ingleside loamy sand, 2 to 5 percent slopes	0.8	6%
395	7	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.4	3%
395	7	WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	1.1	8%
			Total	**14.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	8	AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.5	4%
395	8	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.4	3%
395	8	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
395	8	HnA	Hammonton sandy loam, 0 to 2 percent slopes	3.3	26%
395	8	HvA	Hurlock sandy loam, 0 to 2 percent slopes	2.1	16%
395	8	IeB	Ingleside loamy sand, 2 to 5 percent slopes	1.6	12%
395	8	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.6	5%
395	8	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	4.4	34%
			Total	**12.9**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	9	AsA	Askecksy loamy sand, 0 to 2 percent slopes	2.5	30%
395	9	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.7	8%
395	9	KgB	Klej-Galloway complex, 0 to 5 percent slopes	4.1	49%
395	9	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.7	8%
395	9	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	0.3	4%
395	9	RoA	Rosedale loamy sand, 0 to 2 percent slopes	0.0	0%
			Total	**8.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	WDS	AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.6	2%
395	WDS	BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	0.4	1%
395	WDS	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	1.3	4%
395	WDS	HnA	Hammonton sandy loam, 0 to 2 percent slopes	1.1	4%
395	WDS	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.3	1%
395	WDS	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	25.6	86%
395	WDS	W	Water	0.4	1%
			Total	**29.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	WDS2	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	17.8	44%
395	WDS2	HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.6	1%
395	WDS2	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	21.5	54%
395	WDS2	W	Water	0.2	0%
			Total	**40.1**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	WDS3	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.5	3%
395	WDS3	HnA	Hammonton sandy loam, 0 to 2 percent slopes	2.4	16%
395	WDS3	MuA	Mullica-Berryland complex, 0 to 2 percent slopes	12.4	81%
			Total	**15.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
395	WDS4	EwC	Evesboro sand, 5 to 10 percent slopes	0.0	0%
395	WDS4	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.5	3%
395	WDS4	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
395	WDS4	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	0.1	1%
395	WDS4	HbB	Hambrook sandy loam, 2 to 5 percent slopes	1.2	8%
395	WDS4	HnA	Hammonton sandy loam, 0 to 2 percent slopes	1.6	10%
395	WDS4	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.2	1%
395	WDS4	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0.1	1%
395	WDS4	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	0.8	5%
395	WDS4	RoA	Rosedale loamy sand, 0 to 2 percent slopes	0.0	0%
395	WDS4	WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
395	WDS4	Zk	Zekiah silt loam, frequently flooded	11.1	71%
			Total	**15.6**	**100%**

Rusle Program Version:
Rusle Science Version:
Data Base:

RUSLE2 Erosion Calculation Record

File: plans\Calloway_Bros_395
Access Group: R2_NRCS_Fld_Office

Inputs:

Owner name	*Location*	*Info*
Calloway Brothers	**USA\Maryland\Wicomico County**	**Farm# & Tract#**

Field name	*Soil*	*Slope T Value*	*Slope length, ft*	*Slope steepness, %*
1,11,12,15,16,2,20,21,22	soils\Wicomico County, Maryland\MuA Mullica-Berryland complex, 0 to 2 percent slopes\Mullica mucky sandy loam drained 25%	5.0	150	1.0
13,9	soils\Wicomico County, Maryland\KgB Klej-Galloway complex, 0 to 5 percent slopes\Klej loamy sand 45%	5.0	150	1.0
14	soils\Wicomico County, Maryland\HvA Hurlock sandy loam, 0 to 2 percent slopes\Hurlock sandy loam drained 42%	5.0	150	1.0
17,19,26,3,4,7	soils\Wicomico County, Maryland\FaA Fallsington sandy loam, 0 to 2 percent slopes\Fallsington sandy loam drained 40%	5.0	150	1.0
18,5,6	soils\Wicomico County, Maryland\BhA Berryland mucky loamy sand, 0 to 2 percent slopes\Berryland mucky loamy sand drained 50%	3.0	150	1.0
23	soils\Wicomico County, Maryland\FgA Fallsington loam, 0 to 2 percent slopes\Fallsington sandy loam drained 40%	5.0	150	1.0
25,30,8	soils\Wicomico County, Maryland\RkB Rockawalkin loamy sand, 2 to 5 percent slopes\Rockawalkin loamy sand 75%	5.0	150	1.0
25,30,8	soils\Wicomico County, Maryland\FmB Fort Mott loamy sand, 2 to 5 percent slopes\Fort Mott loamy sand 80%	5.0	150	1.0

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*
1,11,12,15,16,2,20,21,22	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	0.64	0.64	0.38	19	0	0
13,9	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	0.64	0.64	0.33	19	0	0
14	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	0.72	0.72	0.37	19	0	0
17,19,26,3,4,7	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	1.0	1.0	0.35	19	0	0
18,5,6	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	0.43	0.43	0.35	19	0	0
23	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	1.6	1.6	0.30	19	0	0

25,30,8	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	0.92	0.92	0.31	19	0	0
25,30,8	RTcorn / soybean rotation with winter cover	contour-systems\b. absolute row grade 0.1 percent	-- none --	-- none --	0.92	0.92	0.31	19	0	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.

AFO RESOURCE CONCERNS EVALUATION WORKSHEET

Name:	Calloway Brothers	**Agency Interest #:**	67110
Planner:	Edward Silva	**Farm # / Tract #:**	1482 / 306
Site Visit Date:	4/10/2025	**Total Acres:**	320.7 (HHome Farm)
County:	Wicomico	**Production Area Acres:**	19.59

	RESOURCE CONCERN	YES	NO	Assessment
a.	Biosecurity measures	☐	☒	The operator is following biosecurity measures as outlined by the integrator and MDA Animal Health.
b.	Chemical handling	☐	☒	Chemicals related to poultry production are stored in the appropriate designated storage area.
c.	Cultural resources	☐	☒	The production area is established and there are no proposed ground disturbance activities scheduled for the area.
d.	Feedlot area	☐	☒	Not Applicable - no feedlot area.
e.	Floodplains	☐	☒	This is an existing operation and the production area is not located in the FEMA-100 Year Floodplain as per the on-line resources available.
f.	Gully erosion	☐	☒	No gully erosion was identified in the production area or associated water conveyances.
g.	Livestock travel lanes	☐	☒	No resource concerns have been identified.
h.	Nutrient discharge	☐	☒	There are no observable nutrient discharges occurring from the production area.
i.	Objectionable odors	☐	☒	Normal poultry or livestock odors associated with this the type of operation or facility were noted.
j.	Particulate matter emissions	☐	☒	Normal particulate emissions associated with a facility of this size.
k.	Ponding, flooding, seasonal high water table	☐	☒	No abnormal ponding, flooding or high water table issues were identified.
l.	Sediment	☐	☒	No obvious and observable sediment discharges are occurring from the production area.
m.	Streambank/shoreline erosion	☐	☒	No streambank or shoreline areas are present in the production area.
n.	Threatened/endangered species	☐	☒	No geospatial indicators have been identified on the production area.
o.	Waste storage	☐	☒	There are no resource concerns identified for waste storage. Existing waste storage facilities are adequately sized for the operation and are consistent with the waste management system plan.
p.	Waterways	☐	☒	No Maryland regulated waterways have been identified on the property.
q.	Wetlands	☐	☒	Maryland regulated wetlands have been identified on the property greater than 100 feet from the production facilities. This is an existing facility with all required BMPs. No further action is required.)

Implementation Schedule for Farmstead

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

Note: The table below is your Conservation Practice and Facility Implementation Schedule. The practices listed in this schedule **must** be implemented according to the dates indicated. If these practices are not implemented according to schedule, please contact Edward Silva.

Practice and Facility Implementation Schedule

Identify Resource Concern	Practice Name (NRCS Code)	Description of Practice	Date to be Implemented
High potential for discharge where heavy equipment is used frequently in manure movement. At the entry ways of the PWSS and at the front ends of the poultry houses on the Edward Calloway Farm	561	Construct a Heavy Use Area Pad(561) at the location(s) shown on the plan map. Pads will be designed and installed according to NRCS standards and specifications, and will be maintained according to the attached Operation and Maintenance plan.	5/30/2026

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

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

Calloway Brothers

Tommy Page

Calloway Brothers

5-30-25

Date

Implementation Schedule Comments

This required plan is written with the prerequisite that the approved construction design will be implemented and the structures will be constructed in accordance with NRCS Practice Standards 561 (Heavy Use Area Protection).

Operation and Maintenance for BMP's in Farmstead

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

Waste Storage Facility (313)

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

Animal Mortality Facility (316)

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

Heavy Use Area Protection (561)

- Inspect the Heavy Use Area at least twice a year and after severe storm events.
- Scrape the surface as needed to remove excess manure and/or sediment.
- Repair paved areas by repairing holes and replacement of paving materials.
- Replace loose surfacing material such as gravel, cinders, sawdust, tanbark, etc. as needed when removed by livestock, equipment traffic, or scraping.
- Repair any deteriorating areas.

- Maintain all vegetation that is part of the plan by fertilizing and liming according to soil test recommendations and reseeding or replanting as necessary.
- Inspect inlets and outlets of pipes and culverts and remove any obstructions present.
- Maintain flow into filter areas by removing accumulated solids, reconstructing waterbars, etc.

Nutrient Management (590)

- Review or revise plans periodically to determine if adjustments or modifications are needed. At a minimum, review and revise plans as needed with each soil test cycle, changes in manure management, volume or analysis, plants and crops, or plant and crop management.
- Monitor fields receiving animal manures and biosolids for the accumulation of heavy metals and P in accordance with University of Maryland guidance and state law.
- For animal feeding operation, significant changes in animal numbers, management, and feed management will necessitate additional manure analyses to establish a revised average nutrient content.
- Calibrate application equipment to ensure accurate distribution of material at planned rates. For products too dangerous to calibrate, follow University of Maryland or equipment manufacturer guidance on proper equipment design, plumbing, and maintenance.
- Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation to explain the difference.
- Protect workers from and avoid unnecessary contact with nutrient sources. Take extra caution when handling anhydrous ammonia or when managing organic wastes stored in unventilated tanks, impoundments, or other enclosures.
- Use material generated from cleaning nutrient application equipment in an environmentally safe manner. Collect, store, or field apply excess material in an appropriate manner.
- Recycle or dispose of nutrient containers in compliance with State and local guidelines or regulations.
- Organic waste and commercial fertilizer application will be based on the nutrient rates shown Nutrient Management Section of this CNMP.

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

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

The following documents are located in this section:

- Farms with Manure Application /Spreadable Acres & Manure Analysis
- Farm Map
- Soils Map
- Soils Descriptions
- RUSLE2 Soil Loss Calculations

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Adkins Historical #3787-6115								
ADH1	24.9	23.0	--	--	--	--	--	--
ADH2	28.2	28.1	--	--	12	1.5	--	--
Adkins, Earnest #3705-6051								
EA2	7.4	7.0	--	--	4	--	--	2
						--		
Adkins, Jimmy #311-1210								
JA1	16.4	16.4	--	--	12	1	--	2
Ashcraft, Steve #153-1036								
AO1	16.3	16.0	--	--	24	2.5	--	2
AO2	11.3	11.0	--	--	27	3	--	2
Ashton, Alfred #147-1030								
AA1	5.2	5.0	--	--	23	3	--	--
AA2	5.7	5.7	--	--	23	3	--	--
AA3	1.3	1.0	--	--	23	3	--	--
AA4	4.1	4.1	--	--	23	3	--	--
AA5	7.9	7.0	--	--	23	3	--	--
Beazer East #1482-306								
BE1A	7.3	6.0	3	18	27	3	--	2
BE1B	5.8	5.0	3	15	24	2.5	--	2
BE3	18.6	18.6	3	56	24	2.5	--	2
BE4	18.7	18.7	3	56	24	2.5	--	2
BE5	9.4	9.0	3	27	24	2.5	--	2
Burnett, King #3039-5746								
KB4	5.4	5.0	3	15	23	3	--	--
KB6	1.8	1.8	1	2	23	3	--	--
KB10	3.7	3.7	1	4	23	3	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	Acres	Acres	Tons/Acre	Total Tons	N credits	Tons/Acre	Tons/Acre	Tons/Acre
Calloway, Tommy #2152-1020								
TC1	4.1	3.5	--	--	18	1.5	1	1
TC2	14.1	14.1	--	--	18	1.5	1	1
Catlin #209-1098								
CAT2	3.8	3.5	3	11	4	--	--	2
CAT3+4	10.3	10.0	--	--	--	--	--	--
CAT5	16.7	15.0	3	45	4	--	--	2
CAT6	3.9	3.5	1.5	5	4	--	--	2
CAT7	1.6	1.0	3	3	4	--	--	2
CAT8	4.0	3.6	1.5	5	2	--	--	1
CAT9	7.0	7.0	1.5	11	2	--	--	1
CAT10	1.8	1.8	--	--	4	--	--	2
Dietz, Leonard #3785-6113								
LD1	9.5	9.5	3	29	23	3	--	--
Dyer, Will #4041-6466								
WD1A	6.4	6.0	--	--	--	--	--	--
WD1B	4.3	2.3	--	--	23	3	--	--
Edwards, John #3789-6117								
JE3	23.3	23.3	--	--	8	1	--	--
JE5	11.0	11.0	--	--	23	3	--	--
JE6	11.2	11.0	--	--	8	1	--	--
JE7+8	11.3	11.0	--	--	8	1	--	--
Eichelberger, Robert #1535-394								
RE1	8.5	8.5	--	--	24	1.5	3	--
RE2	16.6	16.6	--	--	--	--	--	--
Freed, Terry #241-2871								
GE1	16.2	16.0	--	--	35	3	3	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Glasgow, Elizabeth #1577-450								
EG1	20.1	20.0	--	--	27	3	--	2
Hales Collins #3217-6119								
HBC1	44.9		--	--	--	--	--	--
HBC2	62.1		--	--	--	--	--	--
Hales Glasgow #3288-5797								
HG1	22.4		--	--	--	--	--	--
Hales Hotten #868-1797								
HH1	33.2		--	--	--	--	--	--
Hales Jenkins Terrapin #3214-1879								
HJT1	18.3		--	--	--	--	--	--
HJT2	15.7		--	--	--	--	--	--
Hales Jenkins Warwick #3214-1878								
HJ1	19.6		--	--	--	--	--	--
HJ2	47.6		--	--	--	--	--	--
Hales Luffman #756-1695								
HWL1	42.1		--	--	--	--	--	--
Hales Packing Shed #1624-485								
HPS1	11.4		--	--	--	--	--	--
HPS2	25.3		--	--	--	--	--	--
Hales Packing Shed (Left) #3216-1662								
HPL	10.3		--	--	--	--	--	--
Hales Packing Shed (Right) #3216-1661								
HPR	11.4		--	--	--	--	--	--
Hales Phillips, B. #2778-810								
HP1	36.7		--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Hales Pusey, Elton #1626-930								
HEP1	46.3		--	--	--	--	--	--
Hales Tom Hall #1995-5094								
HTH1	38.1		--	--	--	--	--	--
Hales MaloneAG #4007-6312 + #4174-6498								
HM1	6.0		--	--	--	--	--	--
HM2	6.1		--	--	--	--	--	--
Hales Walmart #728-1554								
HWM1	24.6		--	--	--	--	--	--
HWM2	39.5		--	--	--	--	--	--
Hales Poly Walston #1610-473								
HPW1	42.5		--	--	--	--	--	--
Hatton, Faye #229-1118								
FH1	4.2	4.0	--	--	--	--	--	--
FH2	2.4	2.0	--	--	--	--	--	--
Hensley, B #1481-305								
HN1	6.0	6.0	--	--	20	1	3	--
HN2	5.7	5.7	--	--	20	1	3	--
HN3	15.4	15.4	--	--	32	2.5	3	--
Hochmoth, Bill #3138-5757								
BH1	5.4	4.0	--	--	--	--	--	--
BH2	24.5	22.0	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Hochmuth, Pat #3139-5758								
PH1	6.1	6.1	--	--	--	--	--	--
PH2	30.6	30.4	--	--	--	--	--	--
PH3	8.3	8.3	--	--	--	--	--	--
PH4	21.0	21.0	--	--	--	--	--	--
PH5A	8.0	8.0	--	--	--	--	--	--
PH5B	48.4	48.4	--	--	--	--	--	--
PH6	47.7	47.0	--	--	--	--	--	--
Home #3527-395								
H1	16.0	15.0	--	--	--	--	--	--
H2	25.8	25.0	--	--	12	1.5	--	--
H3	10.8	10.8	--	--	20	2.5	--	--
H4	24.5	24.5	--	--	--	--	--	--
H5	2.3	2.3	--	--	--	--	--	--
H7	6.2	6.2	--	--	--	--	--	--
H8	6.3	6.3	--	--	--	--	--	--
H9	13.1	13.0	--	--	--	--	--	--
H11	15.0	15.0	--	--	23	3	--	--
H12	14.2	14.2	--	--	--	--	--	--
H13	18.9	18.0	--	--	--	--	--	--
H14	8.3	8.0	--	--	--	--	--	--
H15	8.3	8.0	--	--	--	--	--	--
H16	1.0	1.0	--	--	--	--	--	--
H17	1.2	1.0	--	--	--	--	--	--
H18	8.6	8.0	--	--	--	--	--	--
H19	7.2	7.0	--	--	--	--	--	--
Home, Bobby and Mary #3596-1023/1024								
B1	17.0	17.0	--	--	--	--	--	--
B2	4.4	4.0	--	--	23	3	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

Farm/Field	Acres	Spreadable Acres	2025 Tons/Acre	2025 Total Tons	22,23,24 N credits	2024 Tons/Acre	2023 Tons/Acre	2022 Tons/Acre
Home, Doug's #3527-5167								
HD2	12.4	12.4	3	37	--	--	--	--
HD5	1.0	1.0	3	3	--	--	--	--
HD6	10.2	10.0	3	30	--	--	--	--
Home, Hunt Club #2263-1085								
HC1	30.7	29.0	2.5	73	24	2.5	2	--
HC2	39.8	39.0	--	--	4	--	2	--
Home, Lloyd #3527-2339								
HL1	6.1	6.0	--	--	--	--	--	--
Home, Nan's #3527-1119								
N1	22.4	22.4	--	--	23	3	--	--
N2	4.4	4.0	--	--	23	3	--	--
N3	7.6	7.6	--	--	23	3	--	--
N4	12.2	12.2	--	--	23	3	--	--
Home, Tank Farm #3527-1022								
HT1	7.4	7.0	--	--	--	--	--	--
HT2	3.9	3.9	--	--	--	--	--	--
HT3	18.7	18.0	--	--	--	--	--	--
HT4	21.5	21.5	--	--	--	--	--	--
	51.5	50.4						
Johnson-Upper Ferry #1484-308								
J1	12.7	12.7	--	--	31	3	1	2
J2	9.9	9.9	--	--	31	3	1	2
Kenny, David #1463-6332								
DK1	8.0	8.0	--	--	27	3	--	2

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Moore, Pat #256-1145								
PM1+2	2.9	2.9	--	--	--	--	--	--
PM3	13.5	13.0	--	--	12	1.5	--	--
PM4	9.7	9.0	--	--	--	--	--	--
Morgan, William #244-1133								
WM1	5.9	5.9	3	18	--	--	--	--
WM2	10.0	10.0	2	20	--	--	--	--
Nashay, Frank #257-1146 + #3041-5748								
FN1	9.0	9.0	2	18	--	--	--	--
FN2	5.0	5.0	3	15	--	--	--	--
FN3	10.7	10.7	3	32	--	--	--	--
Owens, Frances #2529-5377								
FO1	14.3	14.3	--	--	24	2.5	--	2
FO2-3	5.6	5.6	--	--	27	3	--	2
FO4	6.4	6.0	--	--	27	3	--	2
Owens, Sally #154-1037								
AOM1	19.7	19.7	--	--	24	2.5	--	2
AOM2	3.2	3.2	--	--	27	3	--	2
Palecheck, Bill #3227-1062								
DBP1	32.5	32.0	--	--	--	--	--	--
DBP2	31.7	30.0	--	--	--	--	--	--
DBP3	10.6	10.0	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

Farm/Field	Acres	Spreadable Acres	2025 Tons/Acre	2025 Total Tons	22,23,24 N credits	2024 Tons/Acre	2023 Tons/Acre	2022 Tons/Acre
Palecheck, Bill #3228-1797								
PC1	8.1	8.0	3	24	--	--	--	--
PC2	3.6	3.6	3	11	--	--	--	--
PC3	10.8	10.8	3	32	--	--	--	--
PC5	13.3	13.0	3	39	--	--	--	--
PC6	14.0	14.0	3	42	--	--	--	--
PC7+9	7.2	7.2	3	22	--	--	--	--
PC8	6.4	6.0	3	18	--	--	--	--
PC10	10.8	10.8	3	32	--	--	--	--
PC11	7.7	7.7	3	23	--	--	--	--
PC12	4.8	4.8	3	14	--	--	--	--
Palecheck, Bill - #3361-2579								
PCU1	10.6	10.6	3	32	--	--	--	--
PCU2	26.4	26.4	3	79	--	--	--	--
PCU3	31.7	31.0	3	93	--	--	--	--
Phillips, B-Home #3738-6070								
BPH2A	10.1	10.1	1.5	15	14	1.5	--	1
BPH2B	15.7	15.7	1.5	24	14	1.5	--	1
Phillips, B. - Tower #3738-883								
BPT1A	10.7	10.7	--	--	25	3	--	1
BPT1B	32.9	32.9	--	--	25	3	--	1
BPT2	30.9	30.0	--	--	27	3	--	2
Phillips, G - Nutters #3737-240								
GPM1A	37.2	33.6	3	101	4	--	--	2
GPM1B	43.1	41.4	3	124	4	--	--	3
GPM2	3.2	3.0	3	9	2	--	--	1
GPM3	35.8	35.8	3	107	4	--	--	2

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	Acres	Acres	Tons/Acre	Total Tons	N credits	Tons/Acre	Tons/Acre	Tons/Acre
Phillips, G - Paige #3737-234								
GP1	11.0	10.0	--	--	23	3	--	--
GP2	11.3	11.0	--	--	23	3	--	--
GP3	7.0	7.0	--	--	23	3	--	--
GP4	5.1	5.0	--	--	23	3	--	--
Phillips, M. - Home #3740-6069								
MPH1	22.8	22.8	--	--	16	--	3	2
MPH2	30.0	29.0	1.5	44	4	--	1	--
MPH5	20.6	20.0	--	--	16	--	3	2
MPH6+7	19.3	19.3	--	--	16	--	3	2
MPH8	15.7	15.7	1.5	24	6	--	1	1
Phillips, M. - Home Right #3740-6071								
MPR1+4	7.4	7.0	--	--	24	1	3	2
MPR2+3	7.5	7.5	3	23	39	3	3	2
Phillips, M - Twilley #3741-242								
MGP1	9.1	9.0	3	27	23	3	--	--
MGP2+3	5.3	5.0	3	15	23	3	--	--
Phillips, V - Home #3739-6068								
VP1	26.6	26.6	1.5	40	--	--	--	--
VP2	31.9	31.9	--	--	--	--	--	--
VP3+4	15.0	15.0	--	--	--	--	--	--
VP5+6	19.6	19.6	--	--	--	--	--	--
Phillips, V. - RockaWalkin #3745-6016								
BPR1B	27.5	27.5	--	--	12	--	3	--
BPR1F	46.3	46.3	--	--	12	--	3	--
BPR2B	38.9	38.9	--	--	18	--	3	3
BPR2F	32.2	32.2	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Phillips, V - Twilley #3739-239								
VPT1+4	10.0	10.0	3	30	23	3	--	--
VPT2	70.0	70.0	3	210	12	1.5	--	--
VPT3	9.4	9.0	1.5	14	12	1.5	--	--
Pilchard, Paige #1540-401								
PPA1	42.0	42.0	--	--	23	3	--	--
PPA2	19.2	19.2	--	--	23	3	--	--
PPA3	41.0	41.0	--	--	23	3	--	--
Reynolds, Will #1230-1013								
WR1	8.9	8.9	--	--	27	3	--	2
WR2	13.6	13.6	1	14	4	--	--	2
Saulsbury, Joby #3706-6052								
JS1	12.2	12.0	--	--	4	--	--	2
JS3	6.5	6.0	--	--	4	--	--	2
JS4	2.1	2.0	--	--	4	--	--	2
Saulsbury, Sandra #3965-5601								
S1	13.4	13.0	--	--	--	--	--	--
S2	4.3	4.0	--	--	23	3	--	--
S3	2.6	2.0	--	--	23	3	--	--
Sheman, Louise #1532-1532								
LS1	16.4	16.4	--	--	4	--	--	2
Shiles, April #3242-1135								
AS2A	7.3	7.3	--	--	--	--	--	--
AS2B	5.9	5.9	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

Farm/Field	Acres	Spreadable Acres	2025 Tons/Acre	2025 Total Tons	22,23,24 N credits	2024 Tons/Acre	2023 Tons/Acre	2022 Tons/Acre
Shockley #190-1075								
SH2	11.3	10.5	--	--	27	3	--	2
SH3	1.5	1.0	--	--	12	1	--	2
SH4+9	8.3	7.5	--	--	27	3	--	2
SH5	3.0	3.0	--	--	27	3	--	2
SH6	5.8	5.0	--	--	4	--	--	2
SH7	12.7	12.0	--	--	27	3	--	2
SH8	2.0	2.0	--	--	27	3	--	2
Spear #213-1102								
SP1	0.3	0.3	3	1	--	--	--	--
SP2	11.0	10.0	3	30	--	--	--	--
SP4	5.4	5.4	3	16	--	--	--	--
Todd #243-1132								
T1	11.5	10.0	--	--	--	--	--	--
T2	3.1	3.0	--	--	--	--	--	--
Twilley, Eric #4049-6084								
ET1	24.0	24.0	2	48	--	--	--	2
ET2	21.9	21.9	2	44	--	--	--	2
Wang, Henry #3528-1081								
HW1	32.1	29.0	--	--	4	--	--	2
HW2	13.1	12.0	--	--	4	--	--	2
Webster, Phyllis #1510-353								
BR1	22.0	22.0	--	--	23	3	--	--
BR2	6.5	6.0	--	--	--	--	--	--
BR3	3.7	3.7	--	--	23	3	--	--
BR4	7.3	7.0	--	--	23	3	--	--
BR5	3.4	3.0	--	--	23	3	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
White, Taylor #437-1327								
TW1	12.6	12.4	--	--	35	3	3	--
TW2	4.7	4.6	--	--	35	3	3	--
TW3	5.5	4.8	--	--	35	3	3	--
TW4	2.9	2.9	--	--	12	--	3	--
Wilson, Donald #263-1154								
DW1+2	8.4	8.0	3	24	4	--	--	2
DW3	13.4	13.0	3	39	4	--	--	2
DW4	5.9	5.9	3	18	4	--	--	2
Wilson, S. #2396-5299								
LW1	7.0	6.0	--	--	--	--	--	--
Woglhman, G. #149-1032								
EP1	23.2	23.1	2	46	4	--	--	2
EP2	19.7	18.9	--	--	4	--	--	2
EP3	39.0	38.8	1.5	58	4	--	--	2
				2150	**Total Tons Poultry Manure**			

CALLOWAY BROTHERS-BILLY POULTRY
MANURE NUTRIENT AVAILABILITY

2025

Total N	NH_4	P_2O_5	K_2O
65.2	8.9	40.3	63.5

Available Nutrient 1 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	37	28	40	64
2nd Year	8			
3rd Year	5			
4th Year	2			

Available Nutrient 2 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	74	56	81	127
2nd Year	17			
3rd Year	9			
4th Year	5			

Available Nutrient 2.5 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	93	70	101	159
2nd Year	21			
3rd Year	11			
4th Year	6			

Available Nutrient 3 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	111	84	121	191
2nd Year	25			
3rd Year	14			
4th Year	7			

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"William Calloway Farm "

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Poultry Manure Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1155366
Date Received : 12/20/2024
Date Analyzed: 12/23/2024

Lab No. : 1979

Results For : CALLOWAY BROTHERS
Sample ID : BILLY
ATHOL RD

	Analysis Dry Basis	Analysis As Is Basis	Lbs / Ton Dry Basis	Lbs / Ton As Is Basis	Lbs / Ton Available First Year
Organic N, % N	3.73	2.82	74.7	56.4	29.9
Ammonium, % N	0.586	0.4420	11.7	8.9	8.4
Nitrate, % N	< 0.001	0.0000	0.0	0.0	0.0
Total N, % N	4.32	3.26	86.4	65.2	38.3
Phosphorus, % P_2O_5	2.67	2.02	53.4	40.3	36.3
Potassium, % K_2O	4.21	3.18	84.1	63.5	60.3
Sulfur, % S	1.83	1.38	36.5	27.6	11.0
Calcium, % Ca	2.64	1.99	52.8	39.9	27.9
Magnesium, % Mg	0.80	0.60	16.1	12.1	8.5
Sodium, % Na	0.71	0.54	14.2	10.7	10.7
Zinc, ppm Zn	594.3	448.7	1.2	0.9	0.6
Iron, ppm Fe	692.6	522.9	1.4	1.0	0.7
Manganese, ppm Mn	709.3	535.5	1.4	1.1	0.7
Copper, ppm Cu	317.2	239.5	0.6	0.3	0.5
Aluminum, ppm Al	2635.5	1989.8	5.3	4.0	2.8
Boron, ppm B	60.2	45.5	0.1	0.1	0.1
pH		8.0			
Moisture, %	24.50				
Dry Matter (TS), %	75.50				

"<" - Not Detected / Below Detection Limit

Note: The available first year Ammonium-N is calculated based on maximum availability, or incorporation within 24 hours. Advise a nutrient consultant for adjustments beyond 24 hr incorporation.

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CALLOWAY BROTHERS-PAT MOORE POULTRY
MANURE NUTRIENT AVAILABILITY

2025

Total N	NH_4	P_2O_5	K_2O
54.9	1.7	76	70.1

Available Nutrient 1 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	28	27	76	70
2nd Year	8			
3rd Year	4			
4th Year	2			

Available Nutrient 2 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	57	53	152	140
2nd Year	16			
3rd Year	9			
4th Year	4			

Available Nutrient 2.5 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	71	67	190	175
2nd Year	20			
3rd Year	11			
4th Year	5			

Available Nutrient 3 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	85	80	228	210
2nd Year	24			
3rd Year	13			
4th Year	6			

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Poultry Manure Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD** **21837**

Invoice No. : 1155366
Date Received : 12/20/2024
Date Analyzed: 12/23/2024

Lab No. : 1976

Results For : CALLOWAY BROTHERS
Sample ID : PAT MOORE
CHERRY WALK RD

	Analysis Dry Basis	Analysis As Is Basis	Lbs / Ton Dry Basis	Lbs / Ton As Is Basis	Lbs / Ton Available First Year
Organic N, % N	3.09	2.50	61.8	50.0	26.5
Ammonium, % N	0.106	0.0860	2.1	1.7	1.6
Nitrate, % N	0.195	0.1580	3.9	3.2	3.2
Total N, % N	3.39	2.74	67.8	54.9	31.3
Phosphorus, % P_2O_5	4.70	3.80	93.9	76.0	68.4
Potassium, % K_2O	4.33	3.51	86.6	70.1	66.6
Sulfur, % S	1.19	0.96	23.8	19.3	7.7
Calcium, % Ca	4.42	3.58	88.4	71.5	50.1
Magnesium, % Mg	0.98	0.79	19.7	15.9	11.1
Sodium, % Na	1.09	0.88	21.7	17.6	17.6
Zinc, ppm Zn	796.8	645.0	1.6	1.3	0.9
Iron, ppm Fe	741.0	599.8	1.5	1.2	0.8
Manganese, ppm Mn	910.2	736.8	1.8	1.5	1.0
Copper, ppm Cu	639.2	517.4	1.3	0.7	1.0
Aluminum, ppm Al	393.1	318.2	0.8	0.6	0.4
Boron, ppm B	71.1	57.6	0.1	0.1	0.1
pH		8.6			
Moisture, %	19.05				
Dry Matter (TS), %	80.95				

Note: The available first year Ammonium-N is calculated based on maximum availability, or incorporation within 24 hours. Advise a nutrient consultant for adjustments beyond 24 hr incorporation.

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CALLOWAY BROTHERS-EDDIE TOMMY DEE POULTRY
MANURE NUTRIENT AVAILABILITY

2025

Total N	NH_4	P_2O_5	K_2O
73.9	11.7	47.6	75.2

Available Nutrient 1 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	43	31	48	75
2nd Year	9			
3rd Year	5			
4th Year	2			

Available Nutrient 2 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	86	62	95	150
2nd Year	19			
3rd Year	10			
4th Year	5			

Available Nutrient 2.5 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	107	78	119	188
2nd Year	23			
3rd Year	12			
4th Year	6			

Available Nutrient 3 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	128	93	143	226
2nd Year	28			
3rd Year	15			
4th Year	7			

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"Edward Calloway Farm"
Tommy & Dee Farm

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Account No. : 1002

Poultry Manure Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1155366
Date Received : 12/20/2024
Date Analyzed: 12/23/2024

Lab No. : 1977

Results For : CALLOWAY BROTHERS
Sample ID : EDDIE TOMMY DEE
ATHOL RD

	Analysis Dry Basis	Analysis As Is Basis	Lbs / Ton Dry Basis	Lbs / Ton As Is Basis	Lbs / Ton Available First Year
Organic N, % N	3.55	3.05	71.0	61.0	32.3
Ammonium, % N	0.683	0.5870	13.7	11.7	11.1
Nitrate, % N	0.067	0.0580	1.3	1.1	1.1
Total N, % N	4.30	3.69	86.0	73.9	44.6
Phosphorus, % P_2O_5	2.77	2.38	55.4	47.6	42.9
Potassium, % K_2O	4.37	3.75	87.5	75.2	71.4
Sulfur, % S	1.68	1.44	33.5	28.8	11.5
Calcium, % Ca	2.25	1.93	45.0	38.6	27.0
Magnesium, % Mg	0.80	0.69	15.9	13.7	9.6
Sodium, % Na	0.67	0.58	13.4	11.5	11.5
Zinc, ppm Zn	567.3	487.4	1.1	1.0	0.7
Iron, ppm Fe	633.7	544.4	1.3	1.1	0.8
Manganese, ppm Mn	700.5	601.8	1.4	1.2	0.8
Copper, ppm Cu	311.7	267.8	0.6	0.4	0.5
Aluminum, ppm Al	2376.9	2042.0	4.8	4.1	2.9
Boron, ppm B	63.5	54.6	0.1	0.1	0.1
pH		7.3			
Moisture, %	14.09				
Dry Matter (TS), %	85.91				

Note: The available first year Ammonium-N is calculated based on maximum availability, or incorporation within 24 hours. Advise a nutrient consultant for adjustments beyond 24 hr incorporation.

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CALLOWAY BROTHERS-DOUBLE T POULTRY
MANURE NUTRIENT AVAILABILITY

2025

Total N	NH_4	P_2O_5	K_2O
69.5	12.4	50.6	76.2

Available Nutrient 1 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	41	29	51	76
2nd Year	9			
3rd Year	5			
4th Year	2			

Available Nutrient 2 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	82	57	101	152
2nd Year	17			
3rd Year	9			
4th Year	5			

Available Nutrient 2.5 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	102	71	127	191
2nd Year	21			
3rd Year	11			
4th Year	6			

Available Nutrient 3 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	123	86	152	229
2nd Year	26			
3rd Year	14			
4th Year	7			

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Poultry Manure Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1155366
Date Received : 12/20/2024
Date Analyzed: 12/23/2024

Lab No. : 1978

Results For : CALLOWAY BROTHERS
Sample ID : DOUBLE T
ATHOL RD

	Analysis Dry Basis	Analysis As Is Basis	Lbs / Ton Dry Basis	Lbs / Ton As Is Basis	Lbs / Ton Available First Year
Organic N, % N	3.38	2.83	67.7	56.6	30.0
Ammonium, % N	0.742	0.6200	14.8	12.4	11.8
Nitrate, % N	0.034	0.0280	0.7	0.6	0.6
Total N, % N	4.16	3.48	83.2	69.5	42.3
Phosphorus, % P_2O_5	3.03	2.53	60.5	50.6	45.5
Potassium, % K_2O	4.56	3.81	91.1	76.2	72.4
Sulfur, % S	1.78	1.49	35.6	29.7	11.9
Calcium, % Ca	2.89	2.42	57.8	48.3	33.8
Magnesium, % Mg	0.84	0.70	16.9	14.1	9.9
Sodium, % Na	0.70	0.59	14.0	11.7	11.7
Zinc, ppm Zn	597.4	499.3	1.2	1.0	0.7
Iron, ppm Fe	658.5	550.4	1.3	1.1	0.8
Manganese, ppm Mn	730.0	610.1	1.5	1.2	0.9
Copper, ppm Cu	363.3	303.6	0.7	0.4	0.6
Aluminum, ppm Al	2611.3	2182.5	5.2	4.4	3.1
Boron, ppm B	68.8	57.5	0.1	0.1	0.1
pH		7.9			
Moisture, %	16.42				
Dry Matter (TS), %	83.58				

Note: The available first year Ammonium-N is calculated based on maximum availability, or incorporation within 24 hours. Advise a nutrient consultant for adjustments beyond 24 hr incorporation.

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CALLOWAY BROTHERS - DOUBLE T POULTRY
MANURE NUTRIENT AVAILABILITY

2024

Total N	NH_4	P_2O_5	K_2O
72.7	20.9	42.6	65.4

Available Nutrient 1 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	47	26	43	65
2nd Year	8			
3rd Year	4			
4th Year	2			

Available Nutrient 2 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	94	52	85	131
2nd Year	16			
3rd Year	8			
4th Year	4			

Available Nutrient 2.5 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	117	65	107	164
2nd Year	19			
3rd Year	10			
4th Year	5			

Available Nutrient 3 tons per acre

	N	(Not incorporated)	P_2O_5	K_2O
1st Year	140	78	128	196
2nd Year	23			
3rd Year	12			
4th Year	6			

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Poultry Manure Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1147727
Date Received : 01/04/2024
Date Analyzed: 01/05/2024

Lab No. : 7

Results For : CALLOWAY BROTHERS
Sample ID : DOUBLE T

	Analysis Dry Basis	Analysis As Is Basis	Lbs / Ton Dry Basis	Lbs / Ton As Is Basis	Lbs / Ton Available First Year
Organic N, % N	3.40	2.59	68.1	51.8	27.4
Ammonium, % N	1.371	1.0430	27.4	20.9	19.8
Nitrate, % N	0.006	0.0050	0.1	0.1	0.1
Total N, % N	4.78	3.64	95.6	72.7	47.4
Phosphorus, % P_2O_5	2.80	2.13	56.1	42.6	38.4
Potassium, % K_2O	4.30	3.27	86.0	65.4	62.1
Sulfur, % S	1.84	1.40	36.8	28.0	11.2
Calcium, % Ca	1.80	1.37	35.9	27.3	19.1
Magnesium, % Mg	0.68	0.52	13.6	10.3	7.2
Sodium, % Na	0.59	0.45	11.7	8.9	8.9
Zinc, ppm Zn	464.5	353.4	0.9	0.7	0.5
Iron, ppm Fe	952.0	724.3	1.9	1.4	1.0
Manganese, ppm Mn	590.0	448.9	1.2	0.9	0.6
Copper, ppm Cu	385.2	293.1	0.8	0.4	0.6
Aluminum, ppm Al	4574.2	3480.1	9.1	7.0	4.9
Boron, ppm B	48.3	36.7	0.1	0.1	0.1
pH		7.7			
Moisture, %	23.92				
Dry Matter (TS), %	76.08				

Note: The available first year Ammonium-N is calculated based on maximum availability, or incorporation within 24 hours. Advise a nutrient consultant for adjustments beyond 24 hr incorporation.

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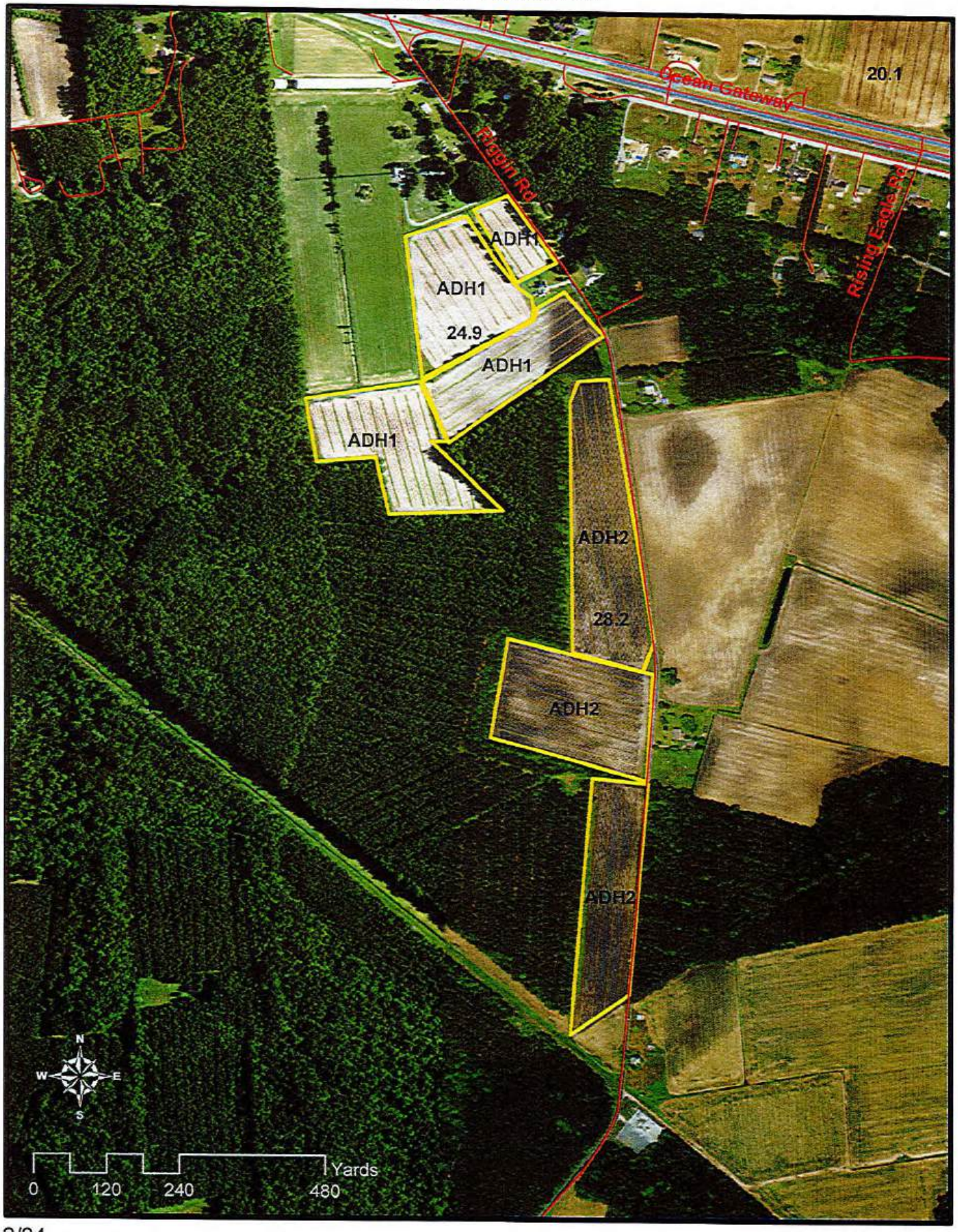
Harrington, DE 19952

Calloway Brothers
Adkins Historical



2/24

McConnell Agronomics

Calloway Brothers
Earnest Adkins, Alfred Ashton, Will Reynolds, Joby Saulsbury, & George Woglhman

2/24

McConnell Agronomics

Calloway Brothers
Jimmy Adkins, Elizabeth Glasgow & David Kenny

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McConnell Agronomics

Calloway Brothers
Steve Ashcraft, Sally & Frances Owens

3/24

McConnell Agronomics

Calloway Brothers
Beazer East

3/24

McConnell Agronomics

Calloway Brothers
King Burnett

2/21

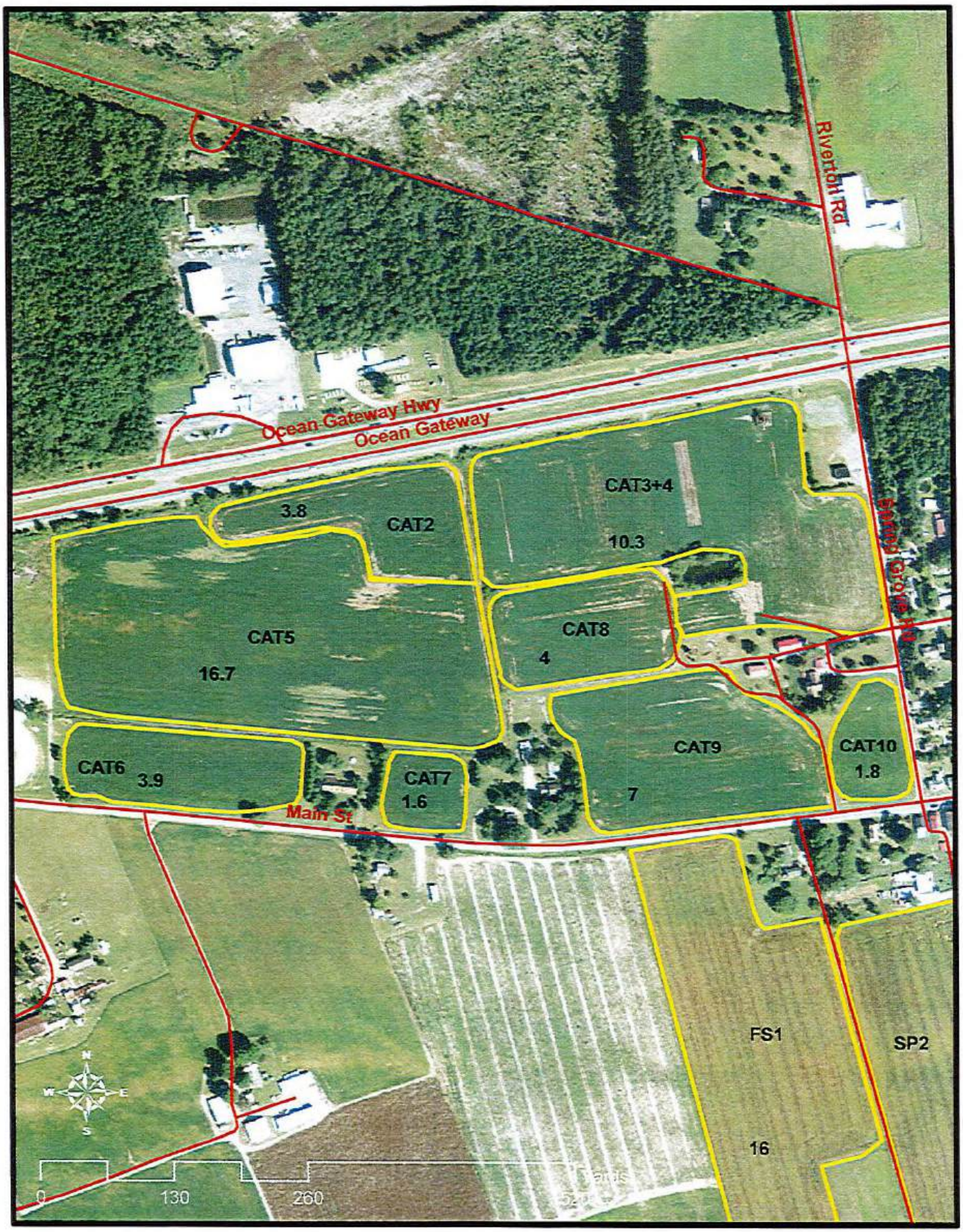
McConnell Agronomics

Calloway Brothers
Tommy Calloway

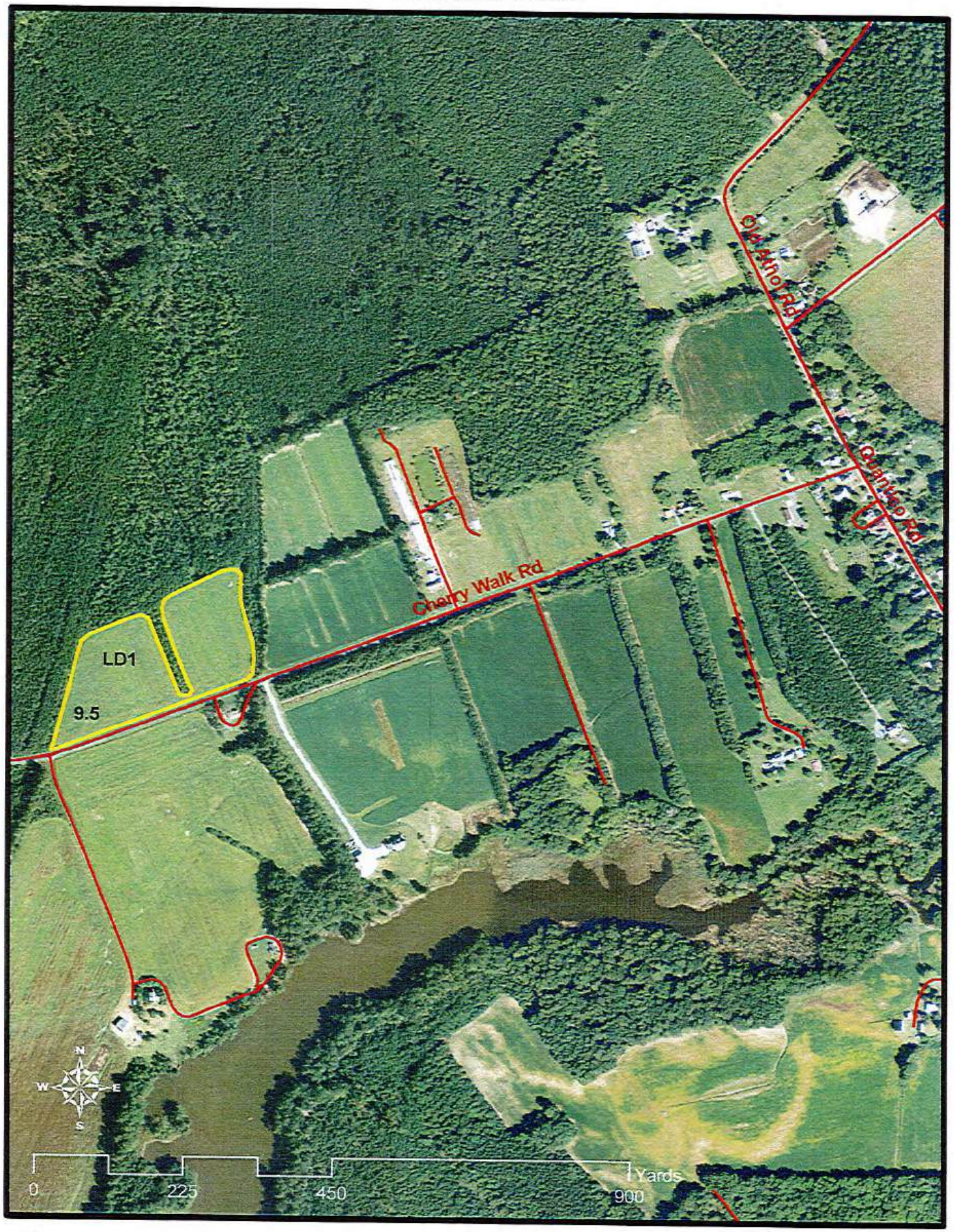
3/24

McConnell Agronomics

Calloway Brothers
Catlin



Calloway Brothers
Leonard Dietz



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McConnell Agronomics

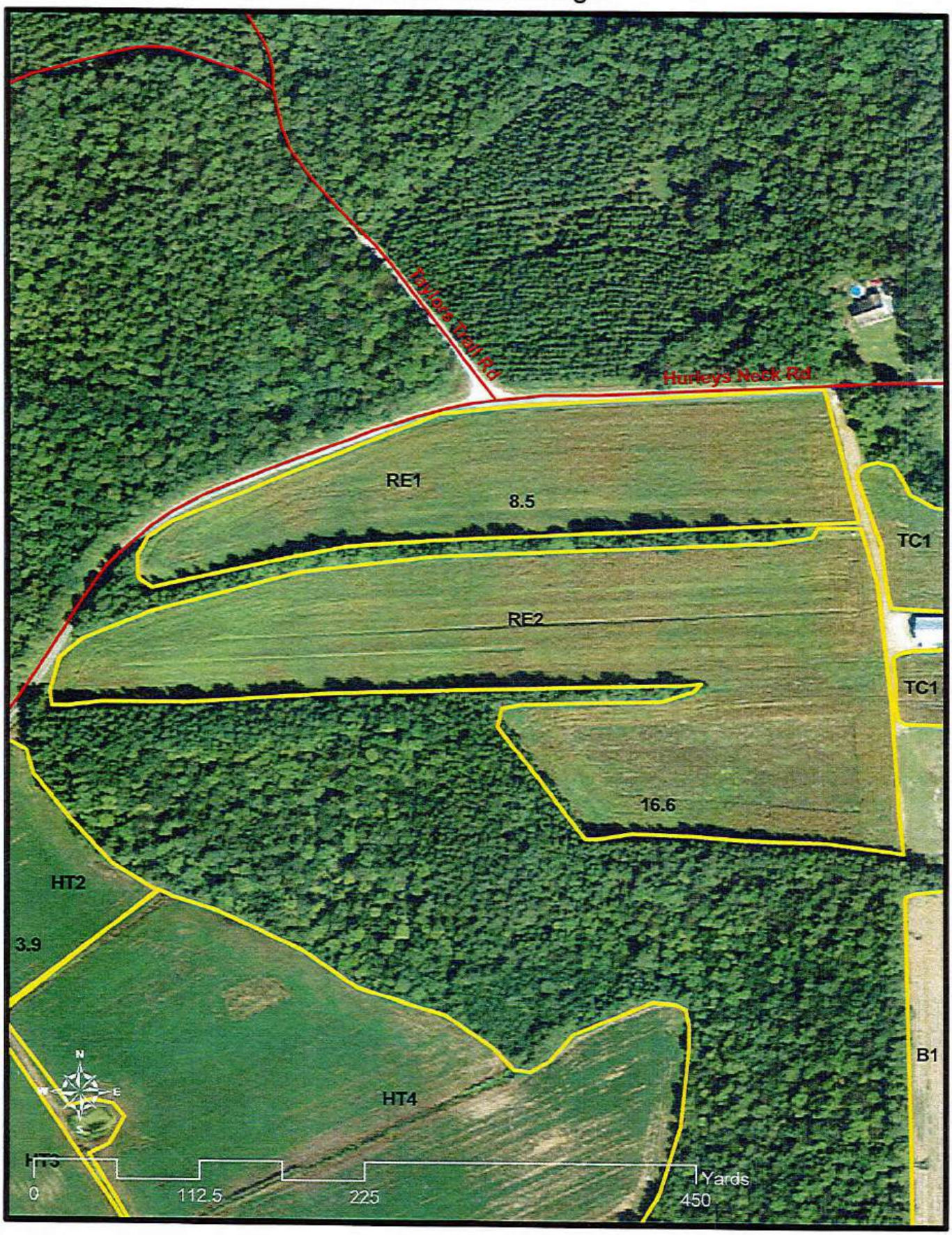
Calloway Brothers
Will Dyer, Phillips Home, Across from Home & Tower

3/24

McConnell Agronomics

Calloway Brothers
John Edwards

Calloway Brothers
Robert Eichelberger



McConnell Agronomics

Calloway Brothers
Terry Freed

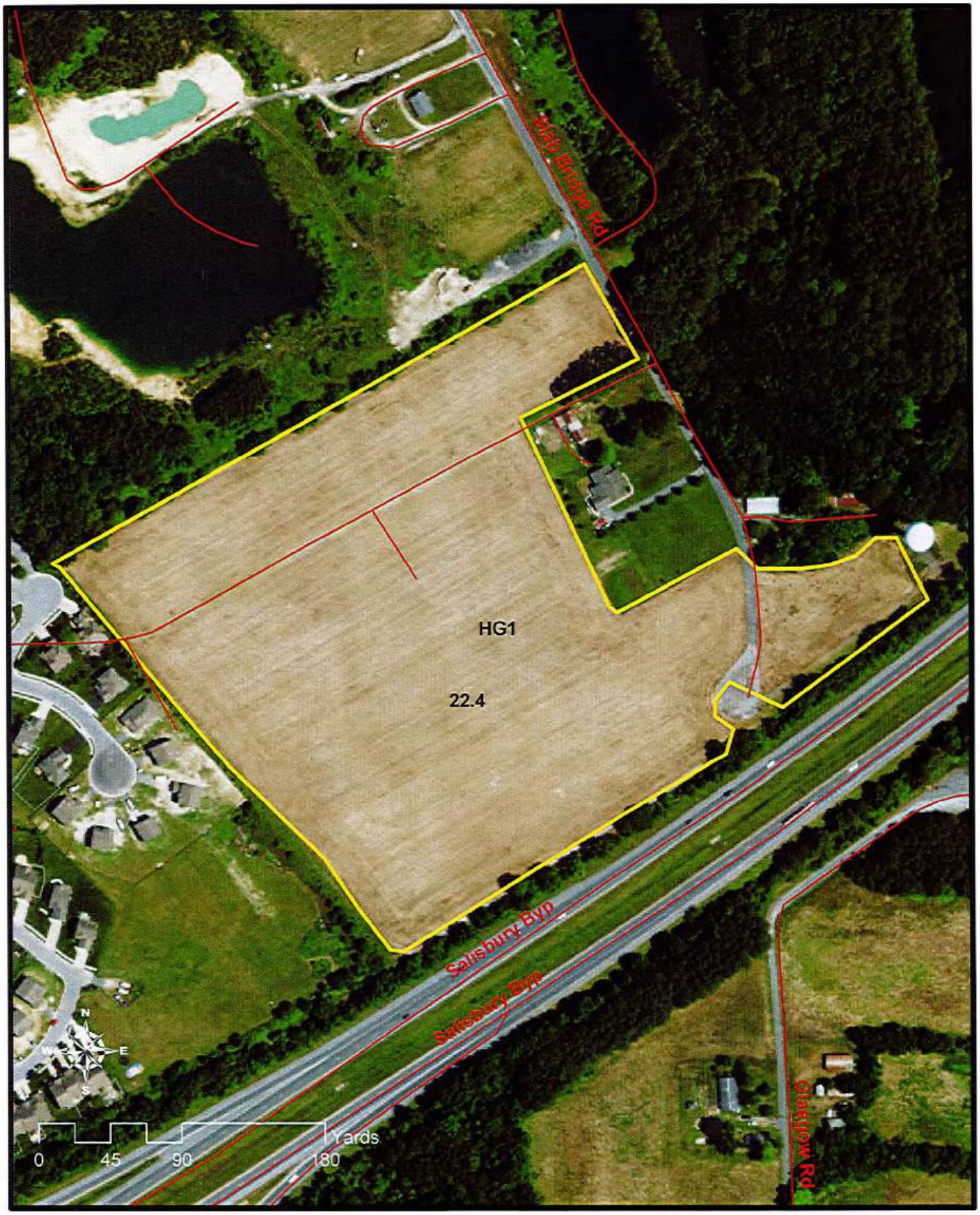
McConnell Agronomics

Calloway Brothers
Tracy Green, Fred Schnoor, & Spear

McConnell Agronomics

Calloway Brothers
Hales Collins #3217-6119

Calloway Brothers
Hales Glasgow #3288-5797



Calloway Brothers
Hales Hotten #868-1797

Calloway Brothers
Hales Phillips #2778-810

3/25

McConnell Agronomics

Calloway Brothers
Hales Jenkins Terrapin #3214-1879

Calloway Brothers
Hales Jenkins Warwick #3214-1878

3/25

McConnell Agronomics

Calloway Brothers
Hales Luffman #756-1695

3/25

McConnell Agronomics

Calloway Brothers
Hales Packing Shed #1624-485

Calloway Brothers
Hales Packing Shed Left #3216-1662

Calloway Brothers
Hales Elton Pusey #1626-930

Calloway Brothers
Hales Tom Hall #1995-5094

Calloway Brothers
Hales MaloneAG #4174-6498 + #4173-6499

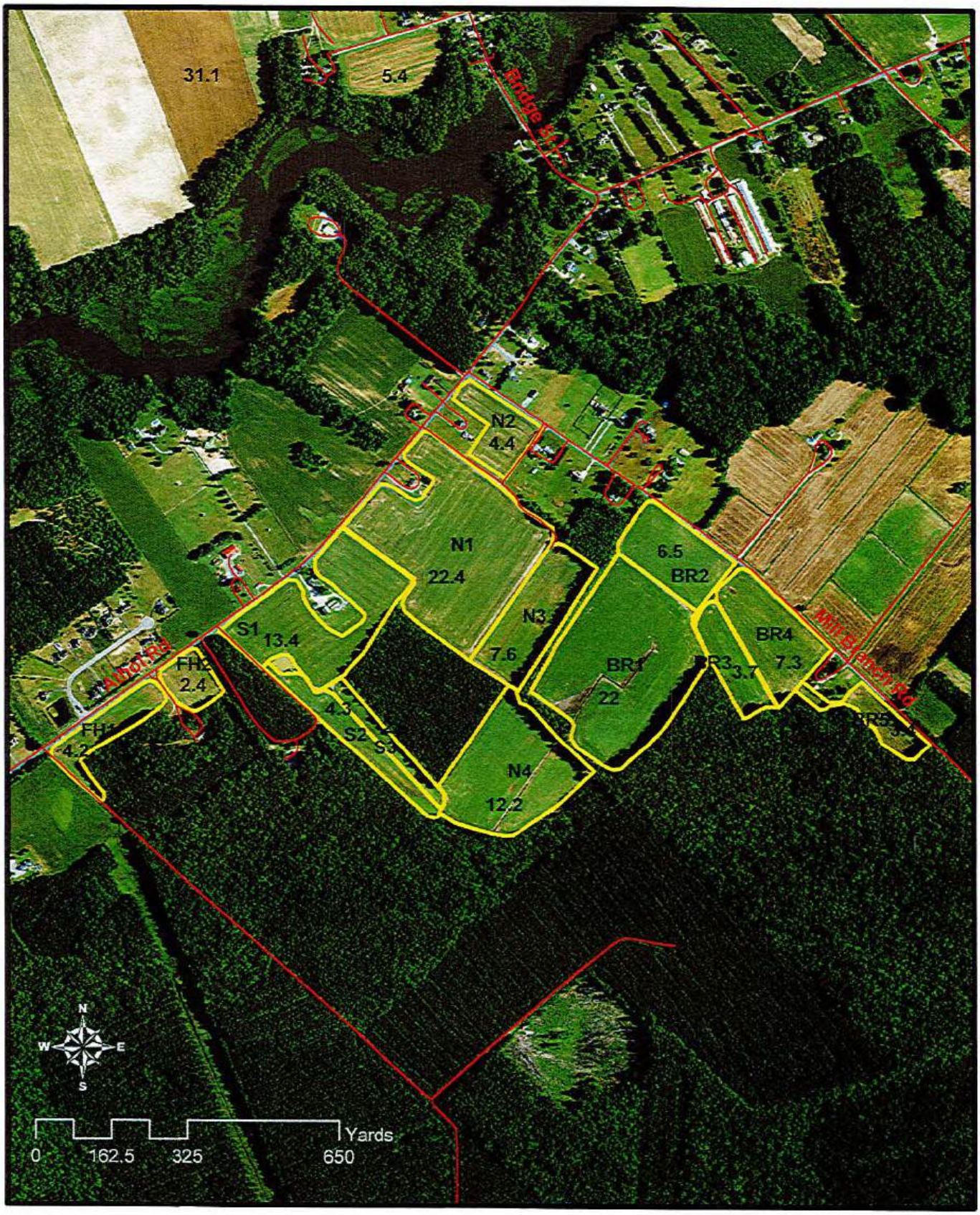
Calloway Brothers
Hales Poly Walston #1610-473

3/25

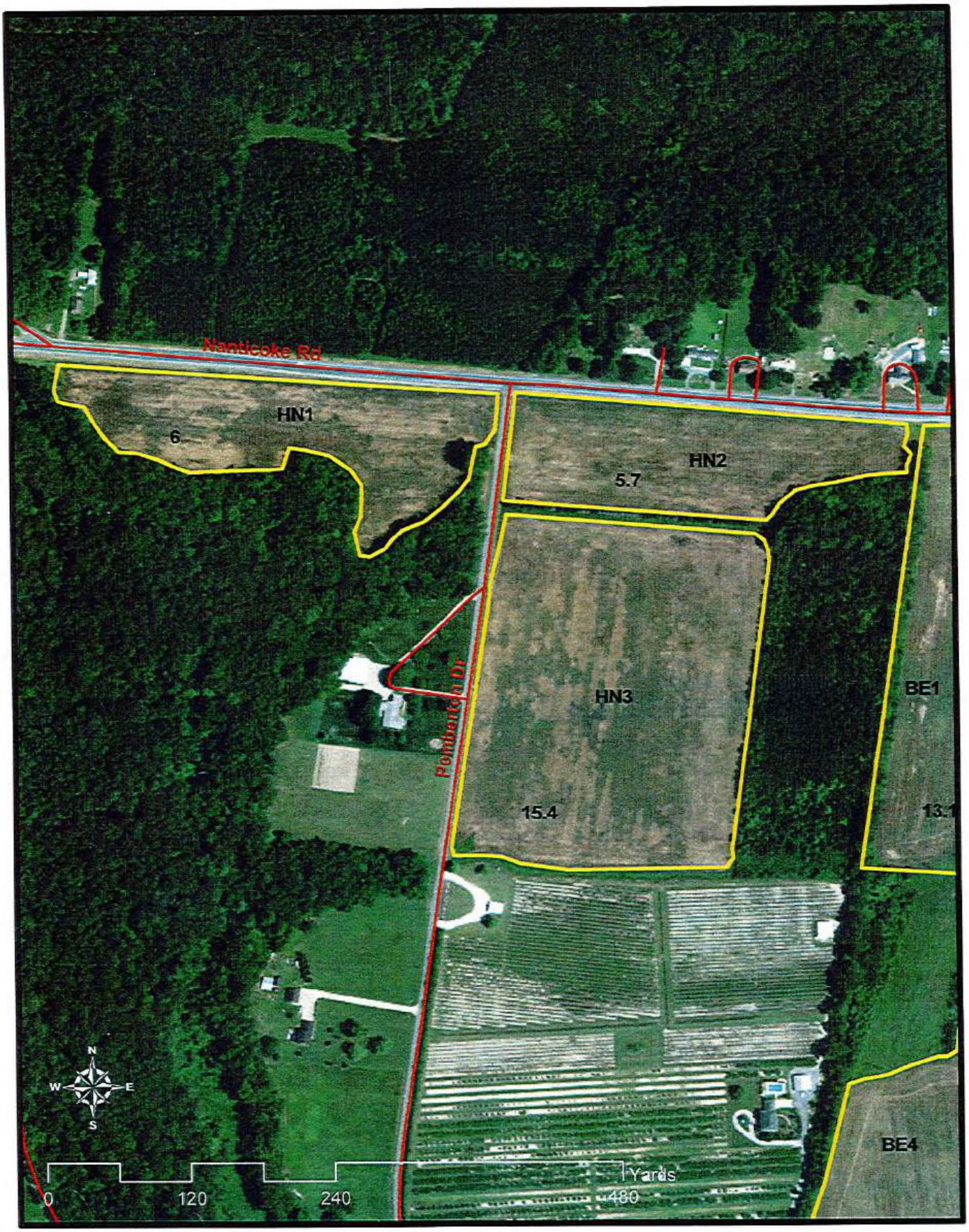
McConnell Agronomics

Calloway Brothers
Hales Walmart #728-1554

Calloway Brothers
Faye Hatton, Nan, Sandra Saulsbury, & Phillis Webster - Brad



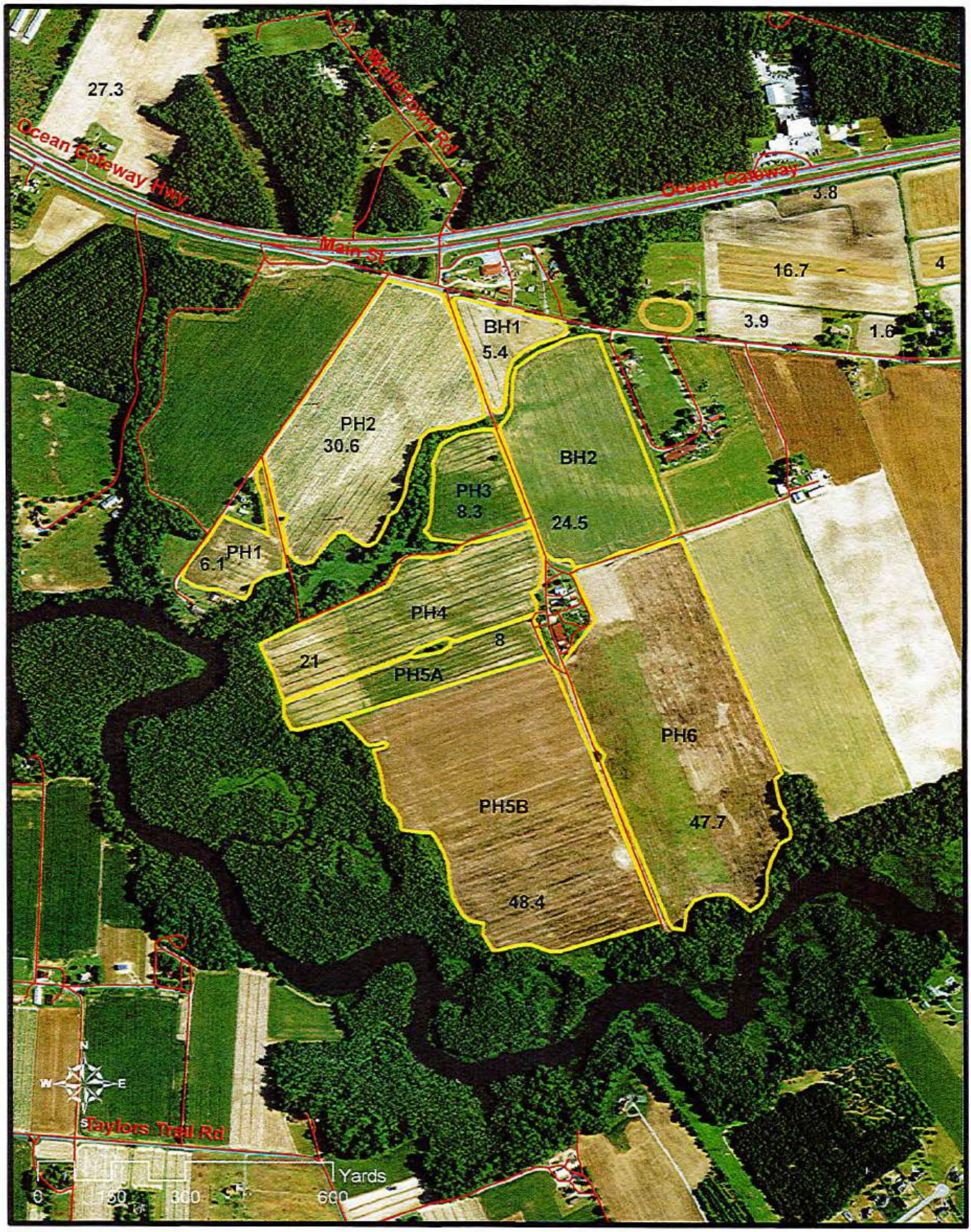
Calloway Brothers
Hensley



3/18

McConnell Agronomics

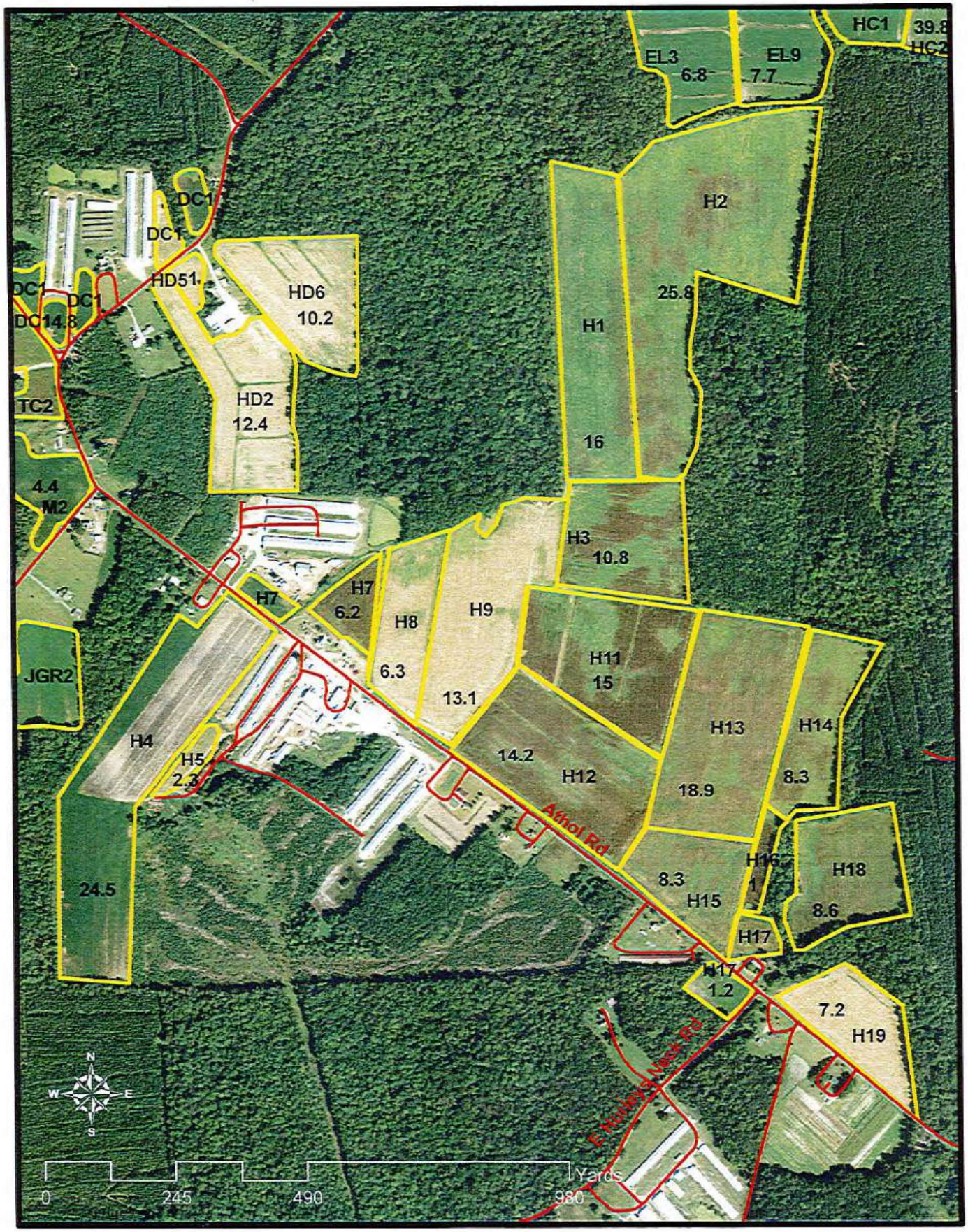
Calloway Brothers
Pat Hochmuth, Bill Hochmuth



3/24

McConnell Agronomics

Calloway Brothers
Home

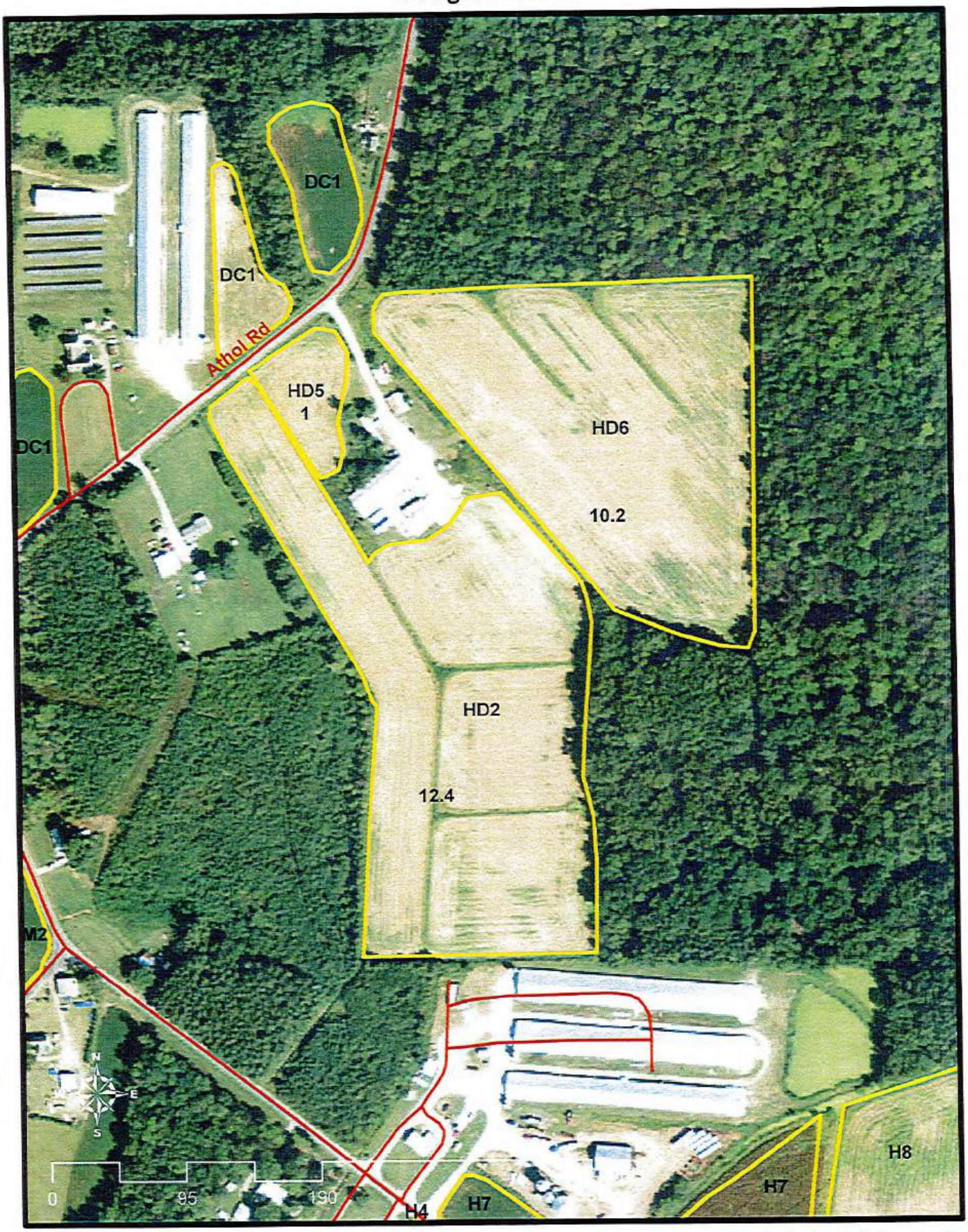


Calloway Brothers
Bobby's, Jeff Gambrill & Lloyd

3/24

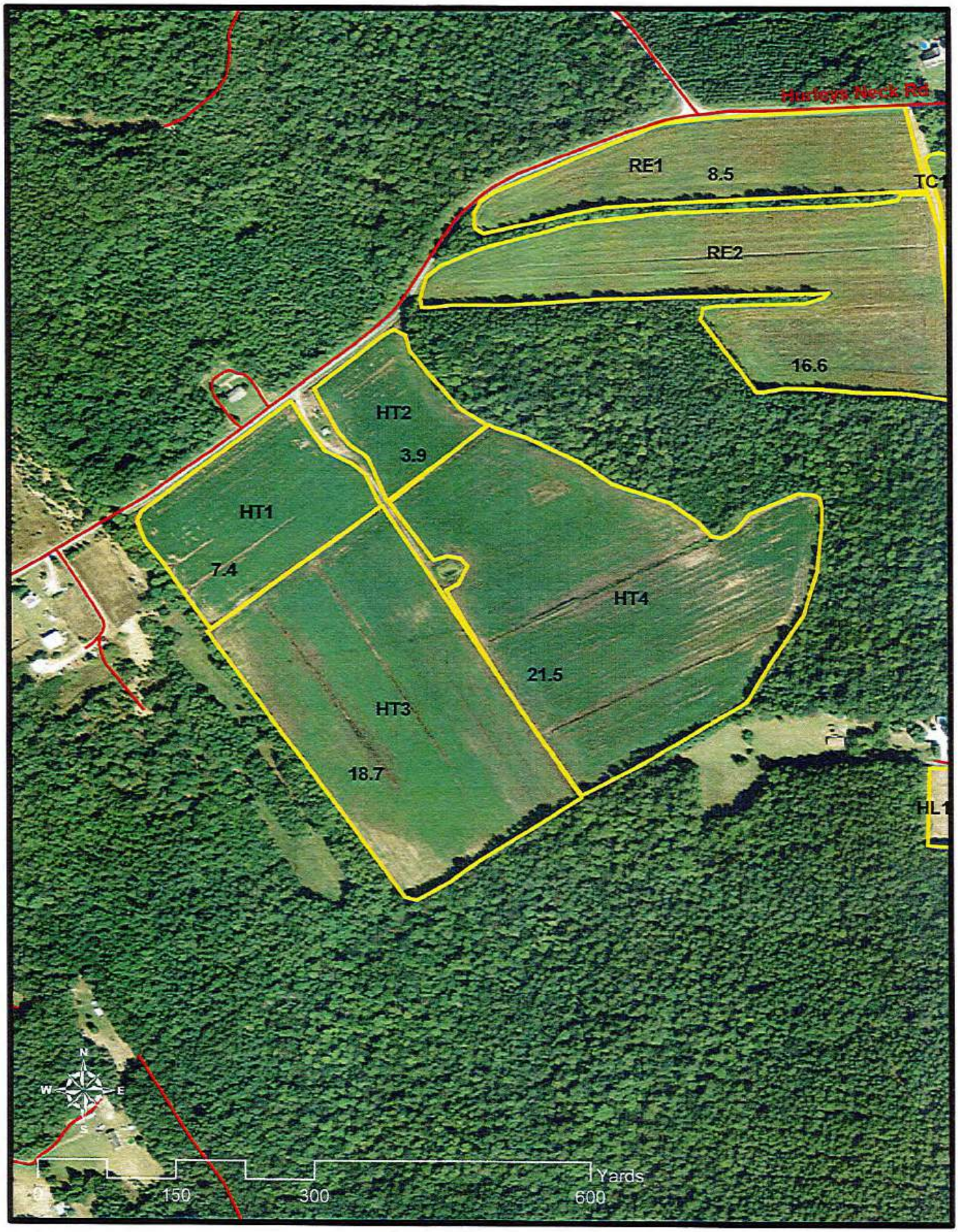
McConnell Agronomics

Calloway Brothers
Doug's Home



McConnell Agronomics

Calloway Brothers
Home Tank

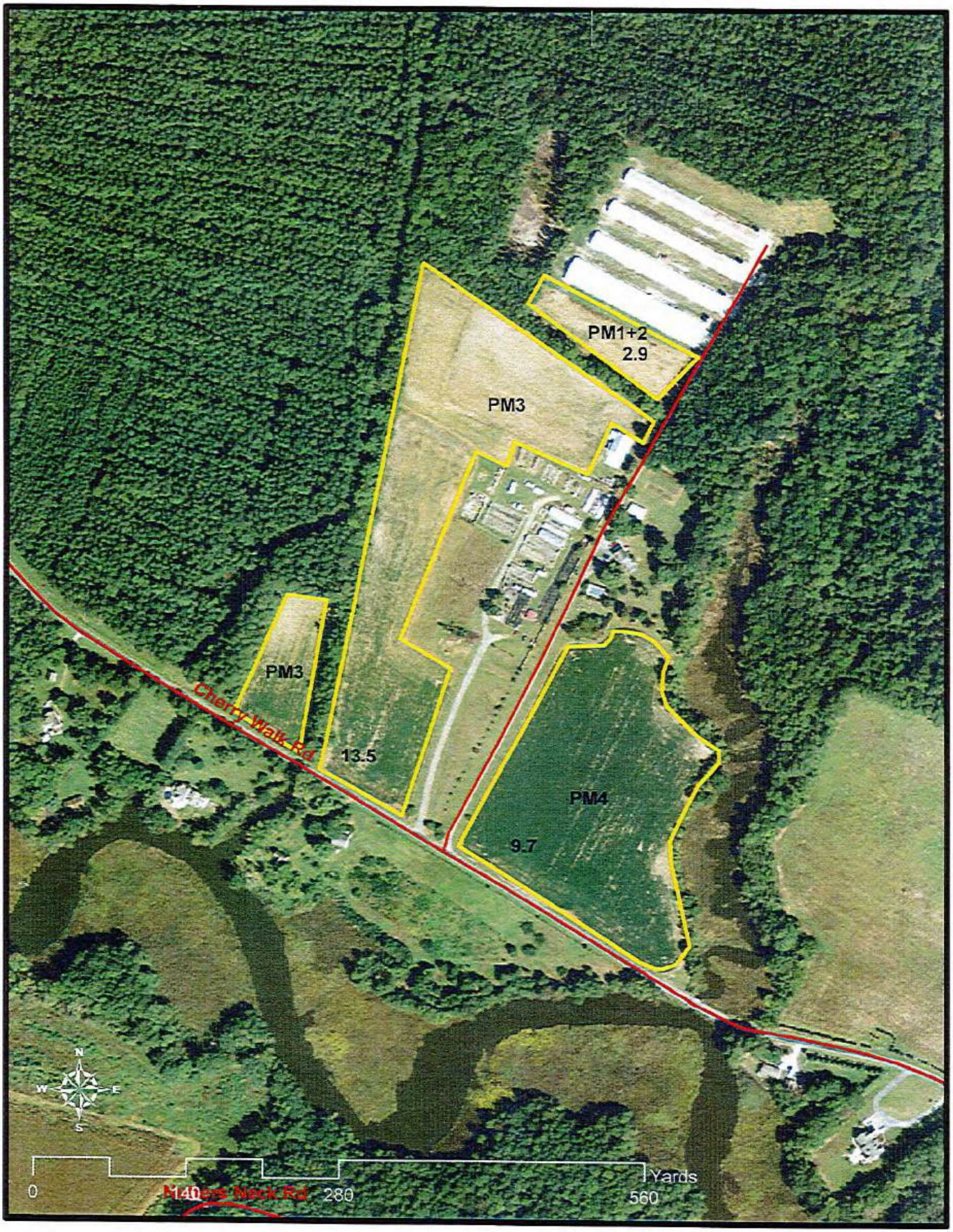


Calloway Brothers
Johnson Upper Ferry

3/24

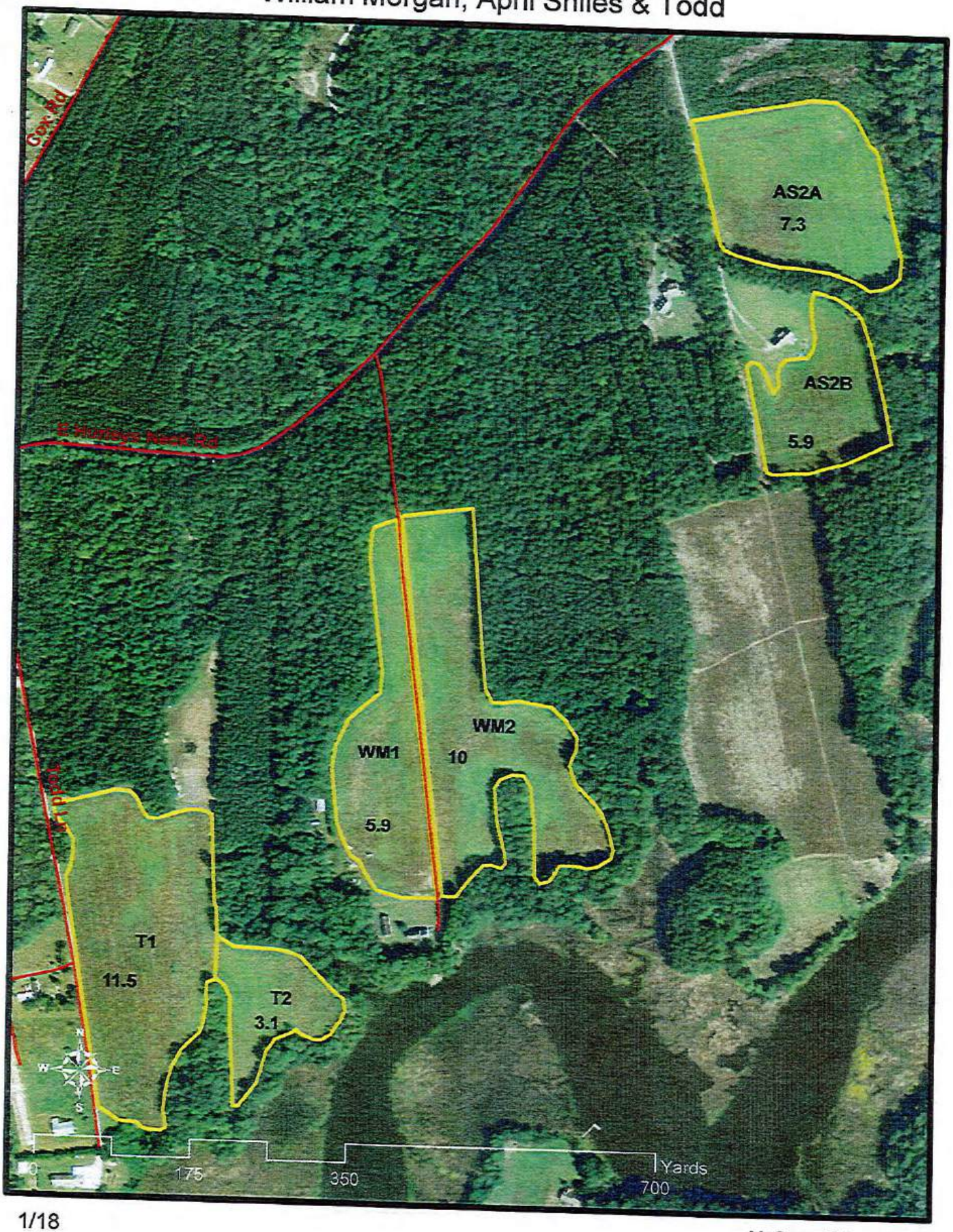
McConnell Agronomics

Calloway Brothers
Pat Moore



McConnell Agronomics

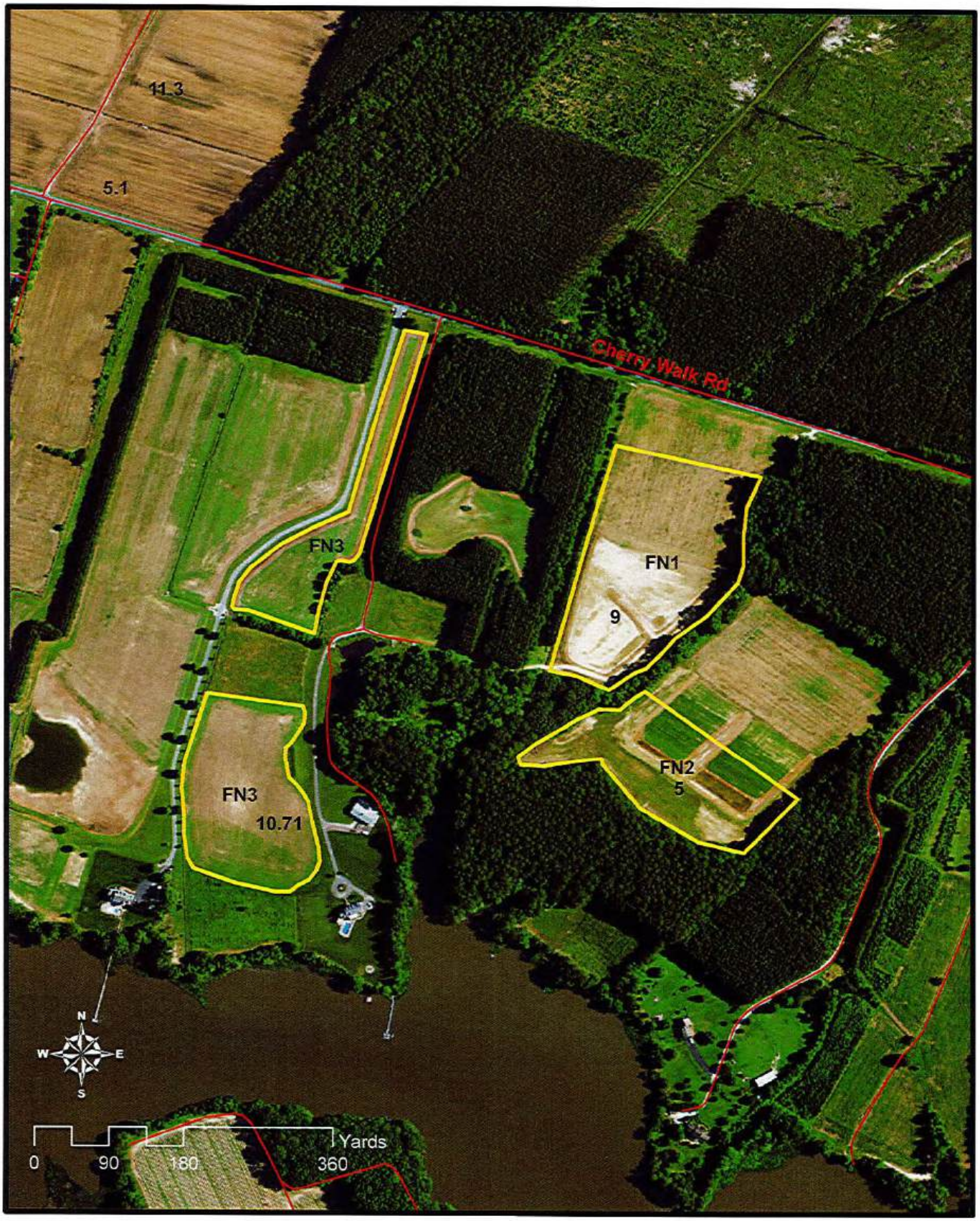
Calloway Brothers
William Morgan, April Shiles & Todd



1/18

McConnell Agronomics

Calloway Brothers
Frank Nashay

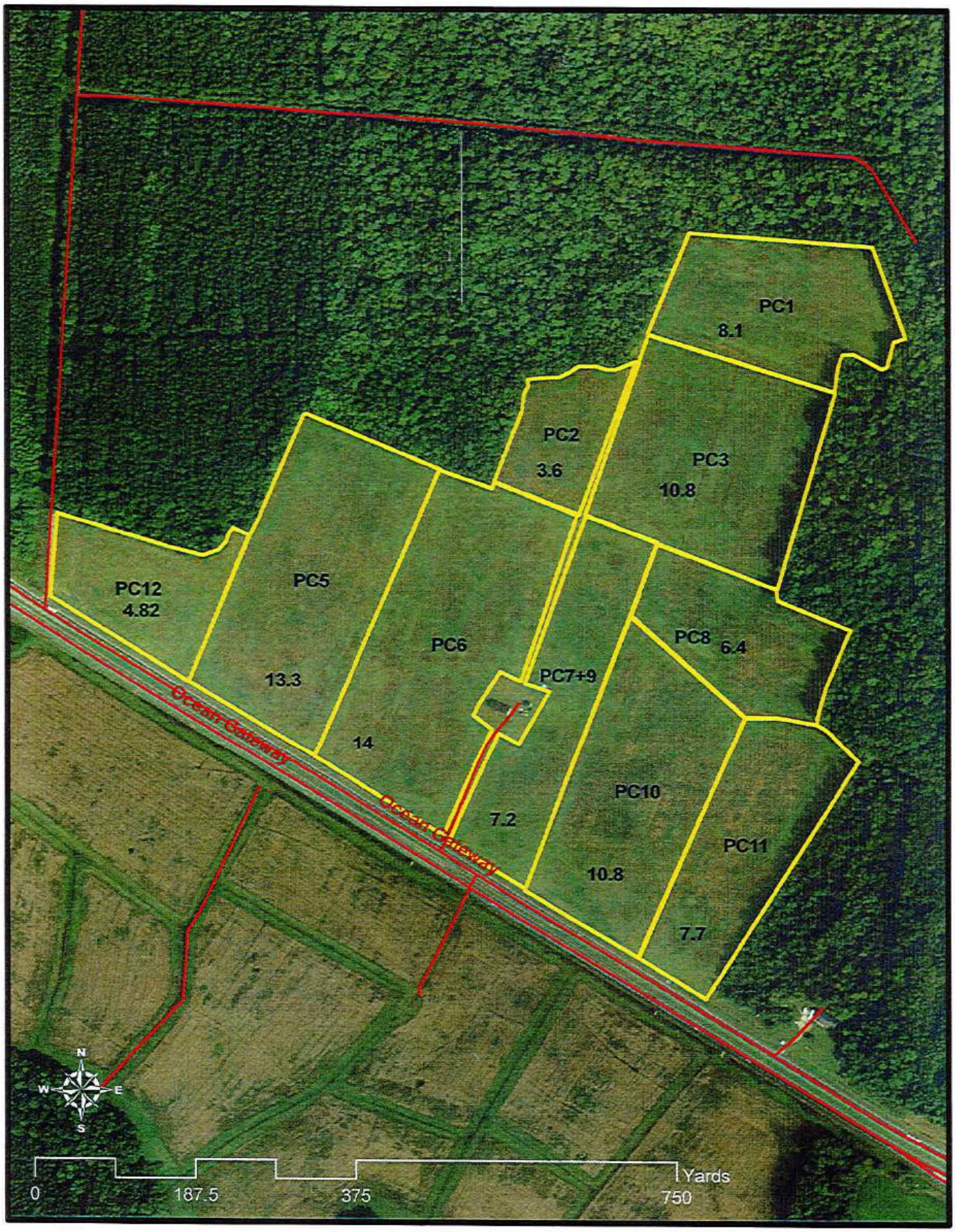


Calloway Brothers
Bill Palechek 3227

2/24

McConnell Agronomics

Calloway Brothers
Bill Palechek 3228



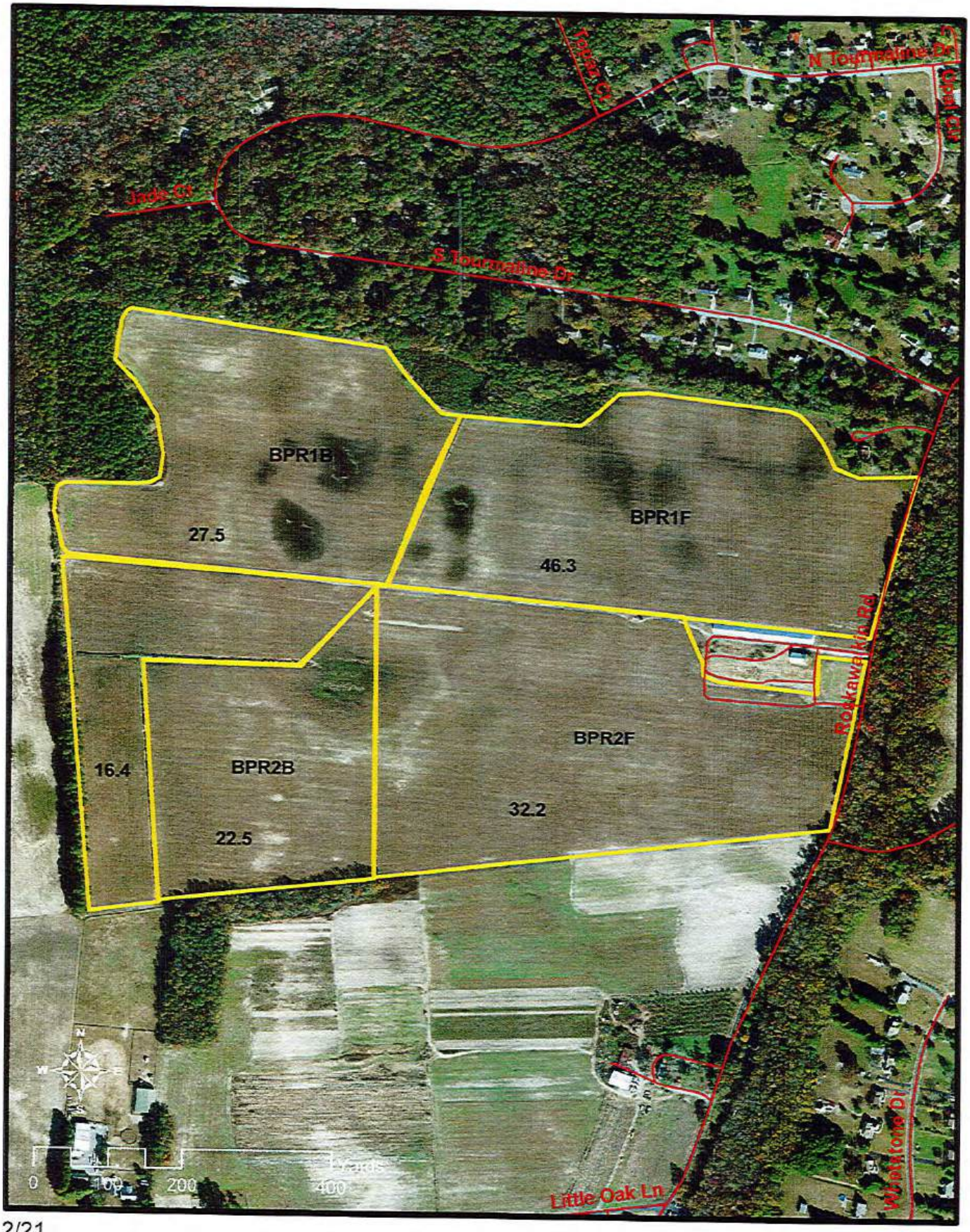
McConnell Agronomics

Calloway Brothers
Bill Palecheck 2579

2/21

McConnell Agronomics

Calloway Brothers
V Phillips Rockawalkin



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McConnell Agronomics

Calloway Brothers
George Phillips - Marks Nutters Neck

McConnell Agronomics

Calloway Brothers
George Phillips - Paige 234

Calloway Brothers
Mike Phillips Home, Right & V Phillips Home

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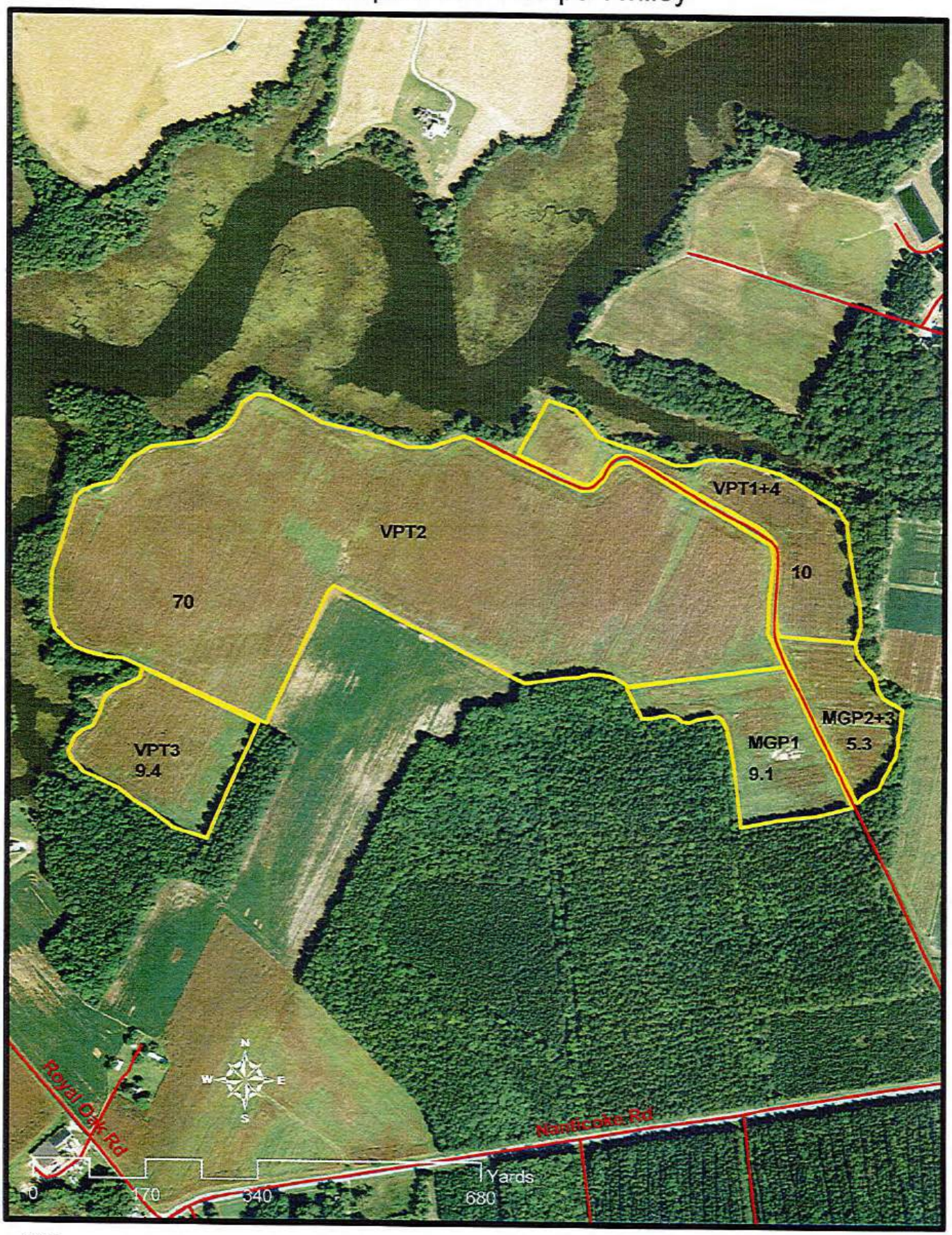
McConnell Agronomics

Calloway Brothers
V Phillips & MG Phillips Twilley



McConnell Agronomics

Calloway Brothers
Paige Pilchard

2/24

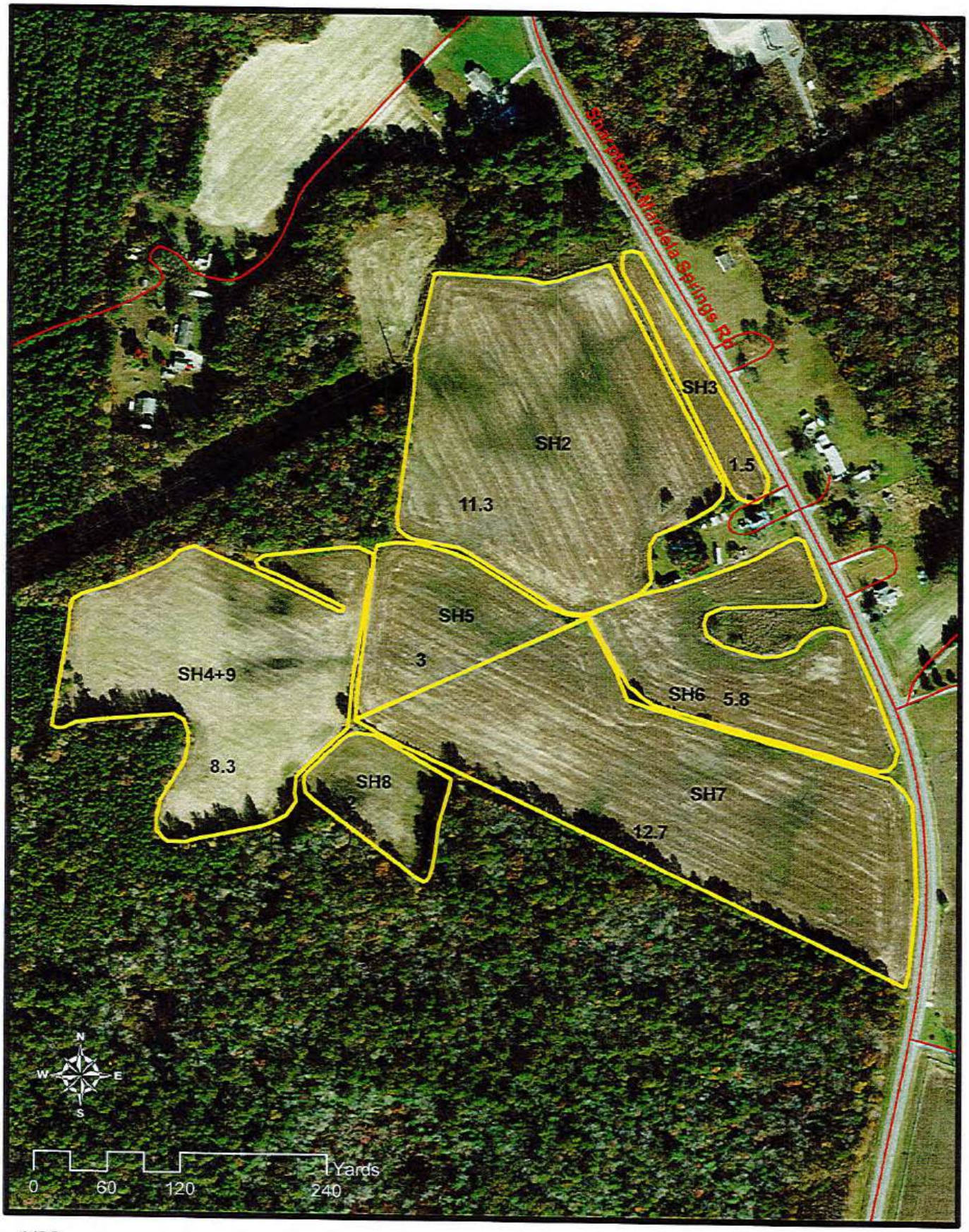
McConnell Agronomics

Calloway Brothers
Louise Sheman

3/24

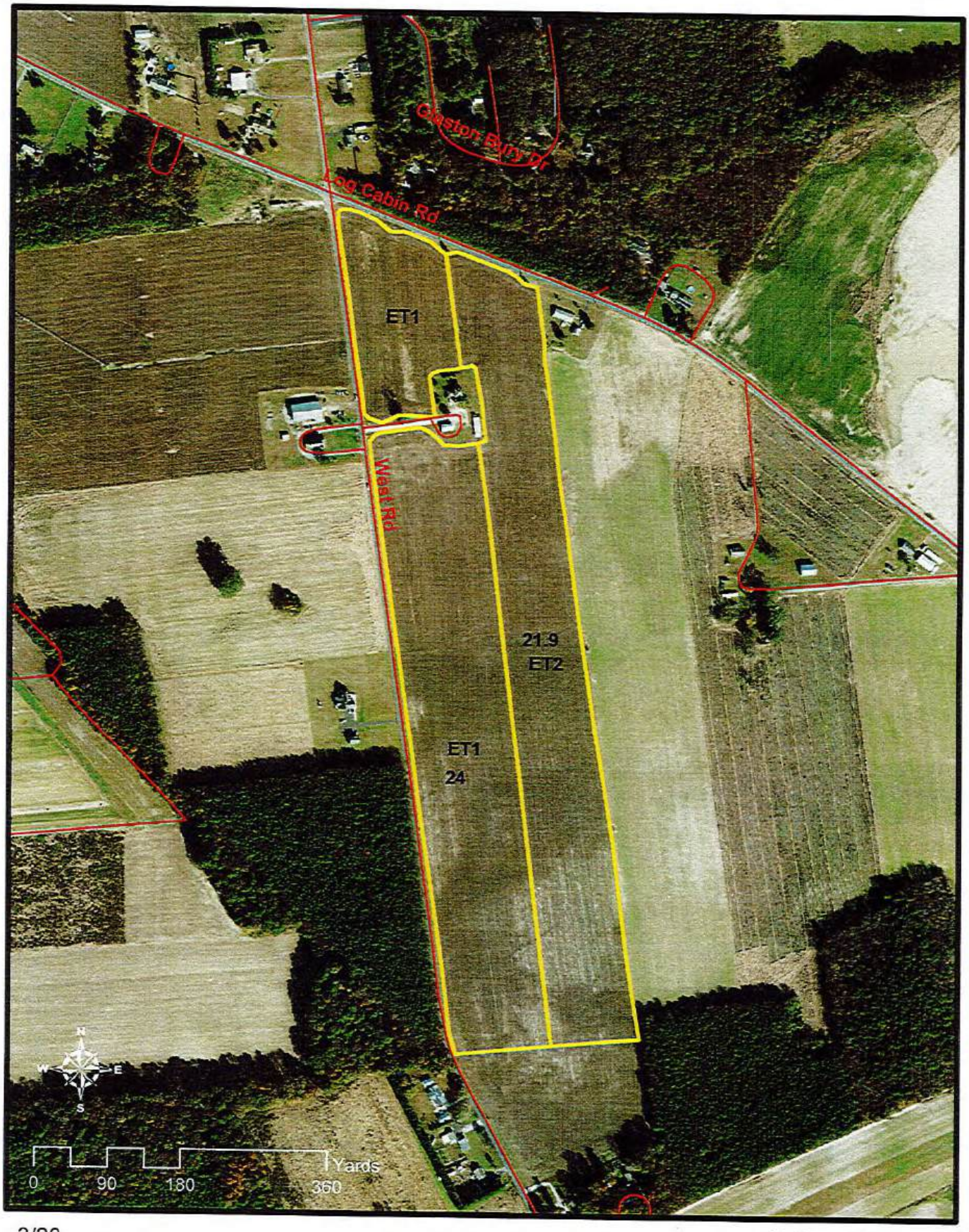
McConnell Agronomics

Calloway Brothers
Shockley



McConnell Agronomics

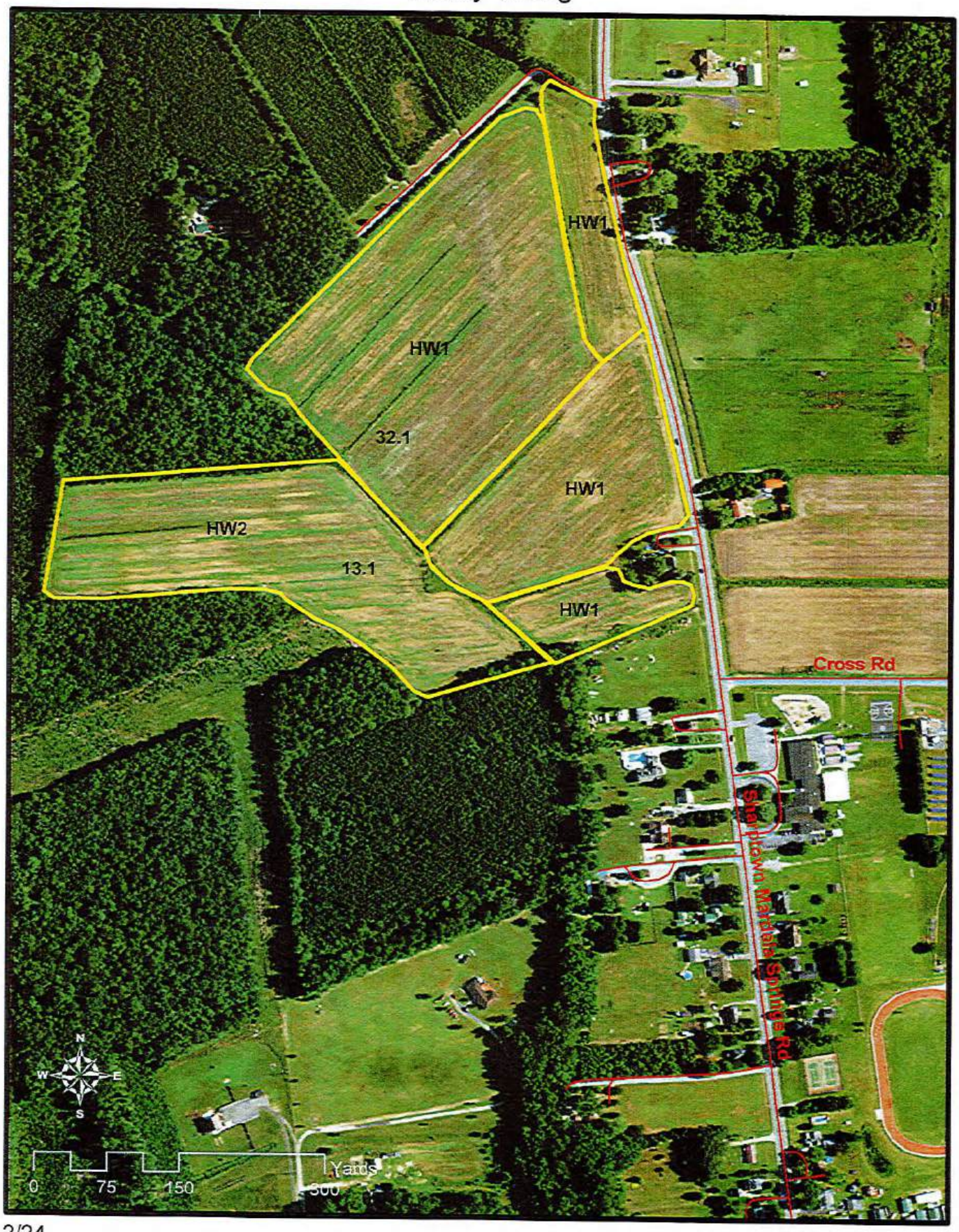
Calloway Brothers
Eric Twilley



3/20

McConnell Agronomics

Calloway Brothers
Henry Wang



McConnell Agronomics

Calloway Brothers
Taylor White

3/23

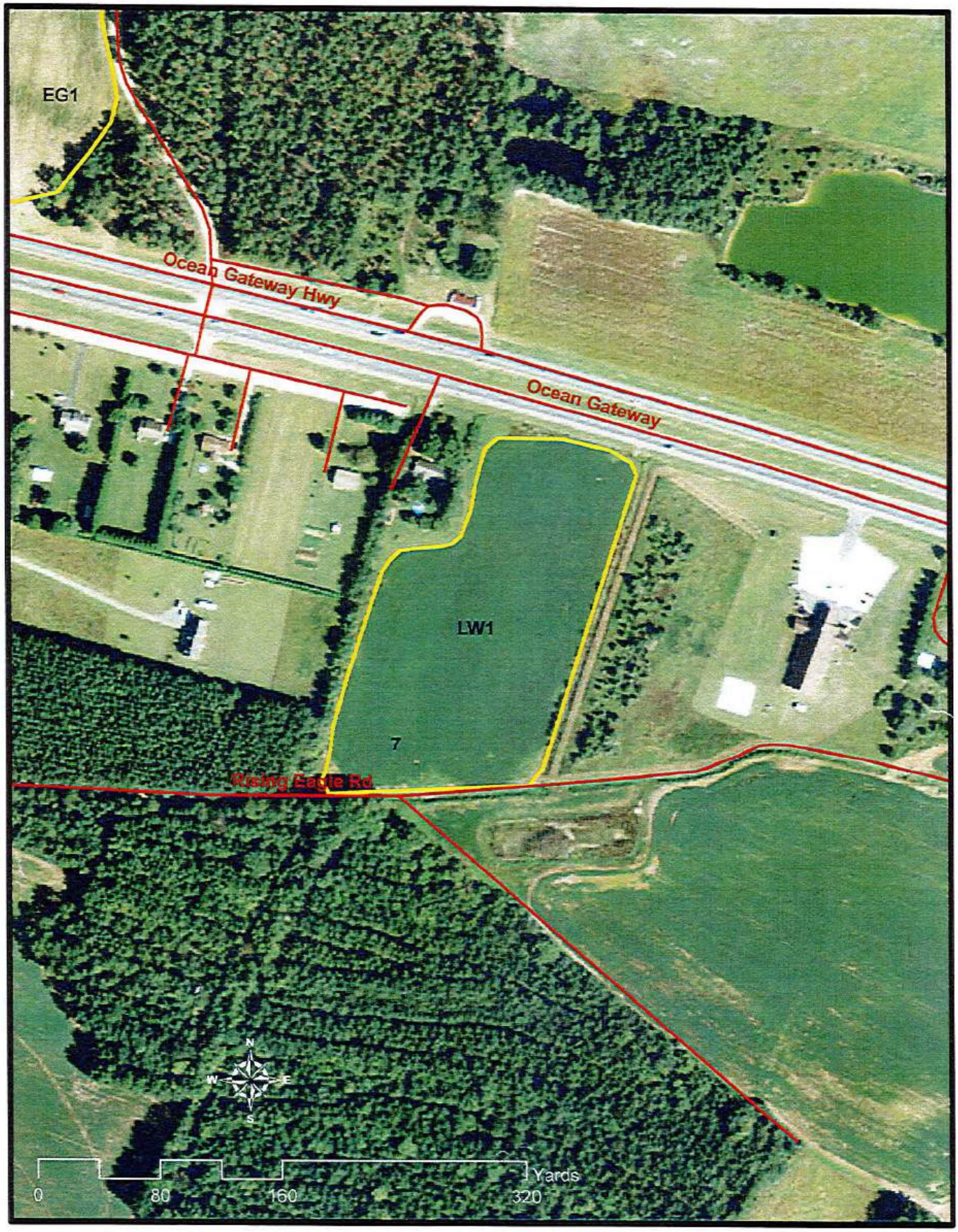
McConnell Agronomics

Calloway Brothers
Donald Wilson

1/18

McConnell Agronomics

Calloway Brothers
Stanford Wilson



McConnell Agronomics

Soil Map—Wicomico County, Maryland
(Calloway - Adkins Historical)

Map Scale: 1:7,540 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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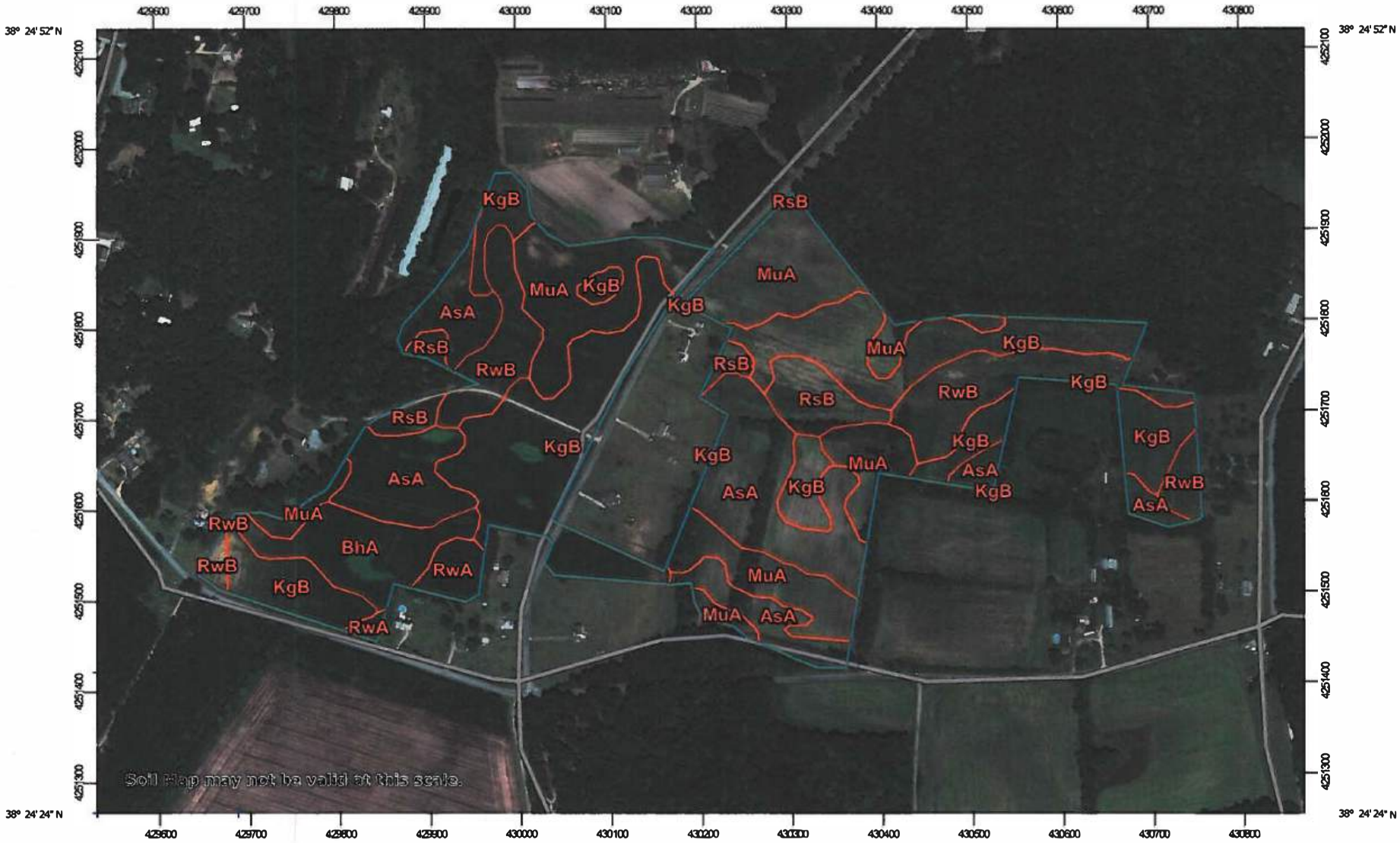
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HnA	Hammonton sandy loam, 0 to 2 percent slopes	9.5	19.3%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	30.3	61.6%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	4.5	9.2%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	4.9	9.9%
RsB	Runclint sand, 2 to 5 percent slopes	0.0	0.0%
Totals for Area of Interest		**49.3**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Earnest Adkins, Alfred Ashton, Will Reynolds, Joby Saulsbury)



Map Scale: 1:6,110 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

N

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	12.9	20.8%
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	3.6	5.7%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	20.5	32.9%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	13.9	22.4%
RsB	Runclint sand, 2 to 5 percent slopes	3.0	4.9%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	1.1	1.8%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	7.1	11.5%
Totals for Area of Interest		**62.2**	**100.0%**

Soil Map—Wicomico County, Maryland
(George Woglhman)

Map Scale: 1:6,200 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	1.4	1.6%
EwC	Evesboro sand, 5 to 10 percent slopes	2.8	3.3%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	17.5	20.3%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	30.6	35.4%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	1.3	1.5%
RsA	Runclint sand, 0 to 2 percent slopes	14.9	17.3%
RsB	Runclint sand, 2 to 5 percent slopes	5.2	6.1%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	6.5	7.5%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	6.1	7.0%
Zk	Zekiah silt loam, frequently flooded	0.0	0.0%
Totals for Area of Interest		**86.3**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Jimmy Adkins, Elizabeth Glasgow & David Kenny)

Map Scale: 1:5,570 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

N

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

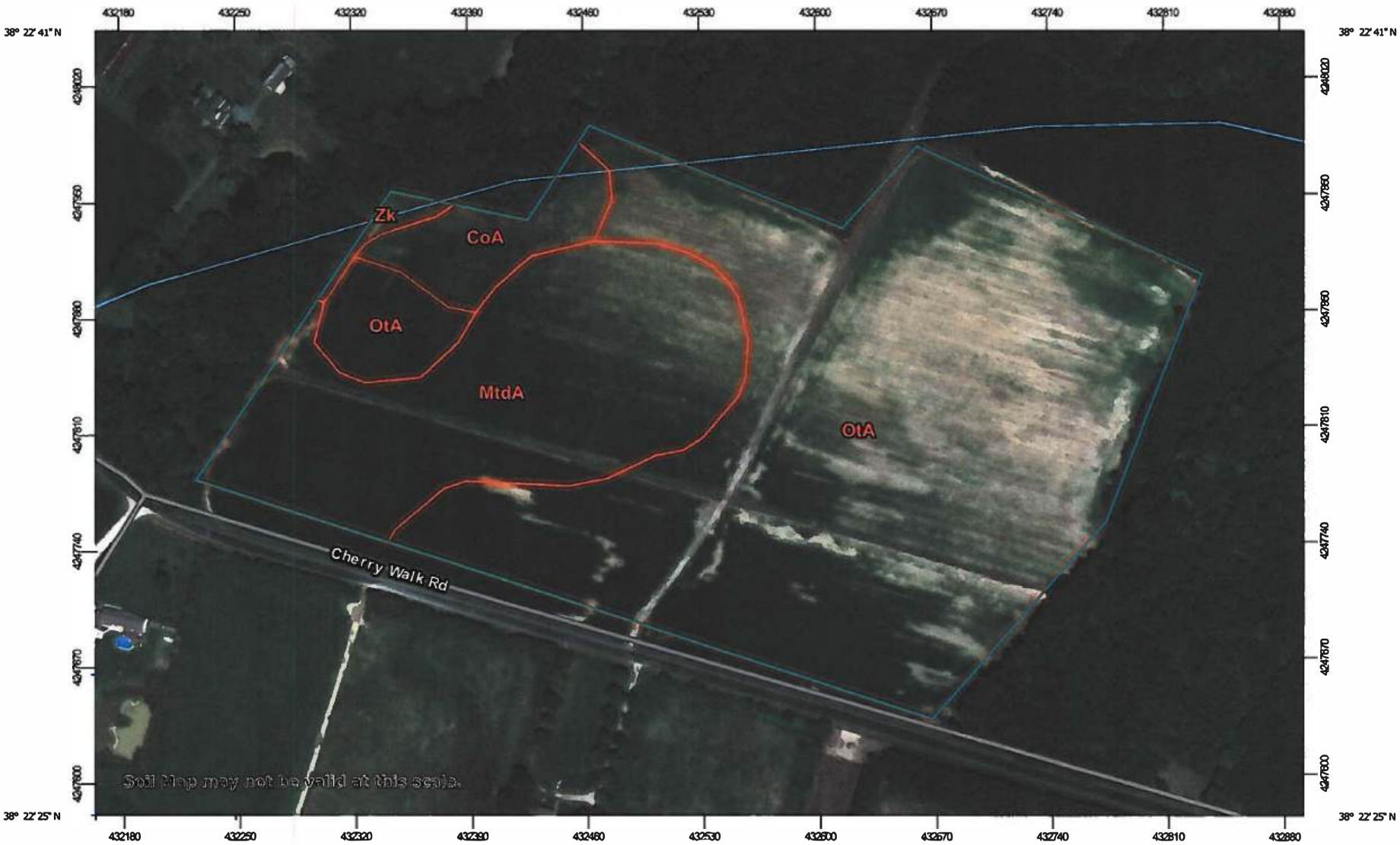
Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
EwB	Evesboro sand, 2 to 5 percent slopes	0.7	0.8%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	0.2	0.3%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	6.8	8.6%
RsB	Runclint sand, 2 to 5 percent slopes	9.6	12.0%
RuB	Runclint loamy sand, 2 to 5 percent slopes	2.6	3.3%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	56.3	70.4%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	3.6	4.5%
Totals for Area of Interest		**79.9**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - George Phillips)



Map Scale: 1:3,330 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

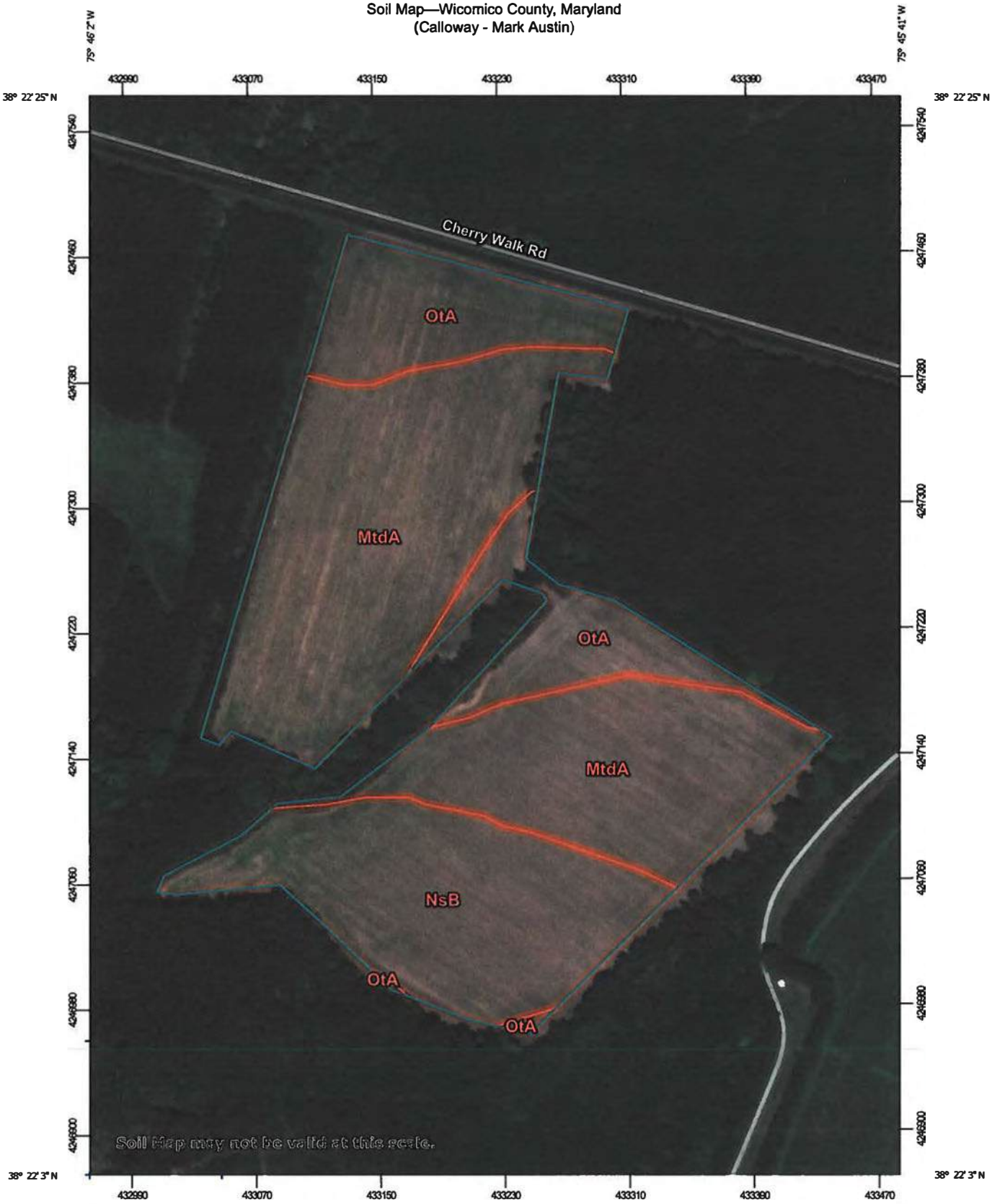
Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CoA	Corsica mucky loam, 0 to 2 percent slopes	1.5	4.6%
MtdA	Mattapex silt loam, 0 to 2 percent slopes, Northern Tidewater Area	8.3	25.2%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	22.8	69.4%
Zk	Zekiah silt loam, frequently flooded	0.2	0.7%
Totals for Area of Interest		**32.9**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Mark Austin)



Map Scale: 1:3,360 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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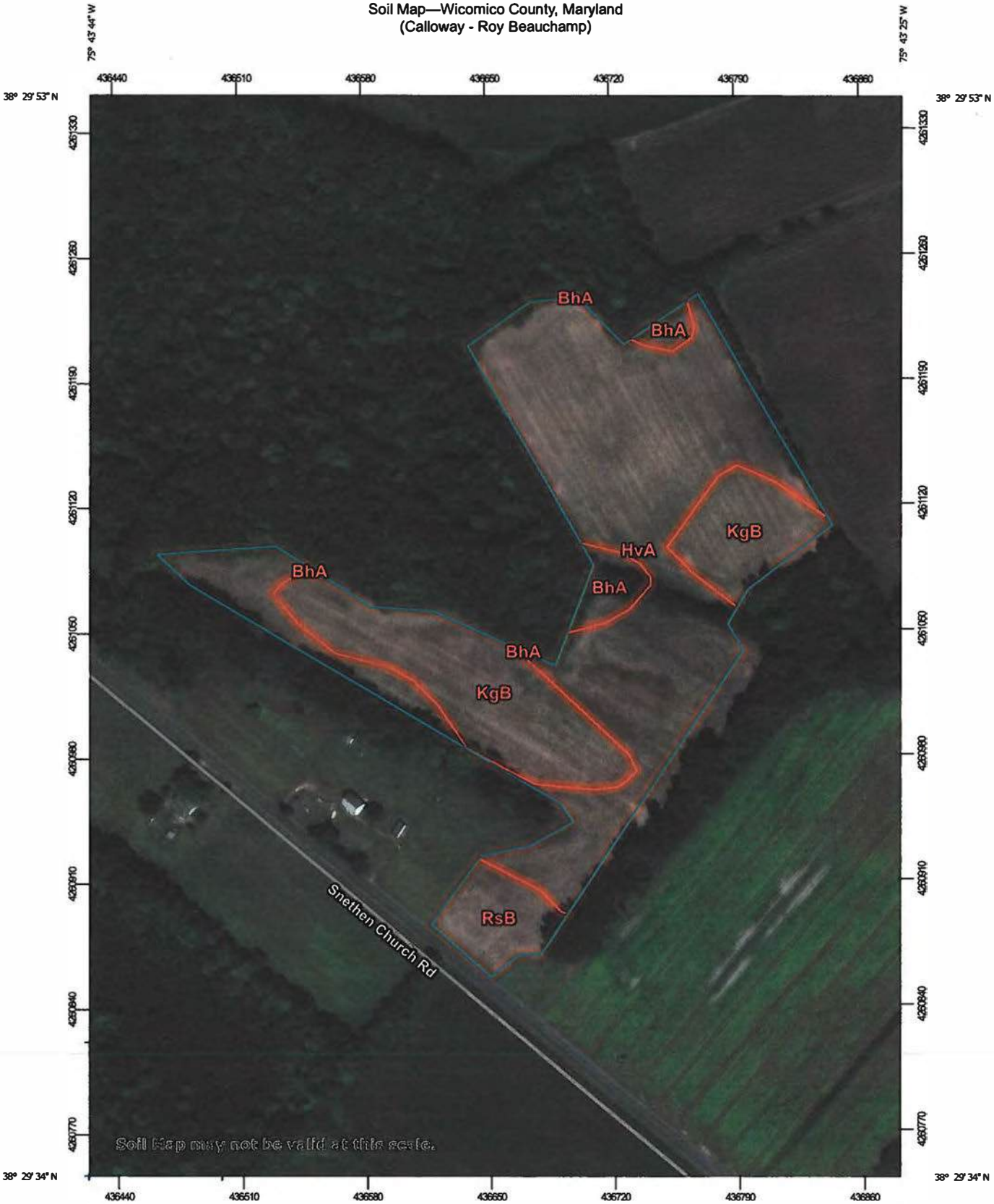
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
MtdA	Mattapex silt loam, 0 to 2 percent slopes, Northern Tidewater Area	14.5	55.3%
NsB	Nassawango silt loam, 2 to 5 percent slopes	6.4	24.6%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	5.3	20.1%
Totals for Area of Interest		**26.1**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Roy Beauchamp)



Map Scale: 1:2,950 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	0.4	3.8%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	7.4	63.2%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	3.2	27.1%
RsB	Runclint sand, 2 to 5 percent slopes	0.7	5.9%
Totals for Area of Interest		**11.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Beazer East)

Map Scale: 1:4,770 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	32.6	57.5%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	24.1	42.5%
Totals for Area of Interest		**56.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Bobby's, Mary's, Jeff Gambrill & Lloyd Home)

Map Scale: 1:4,140 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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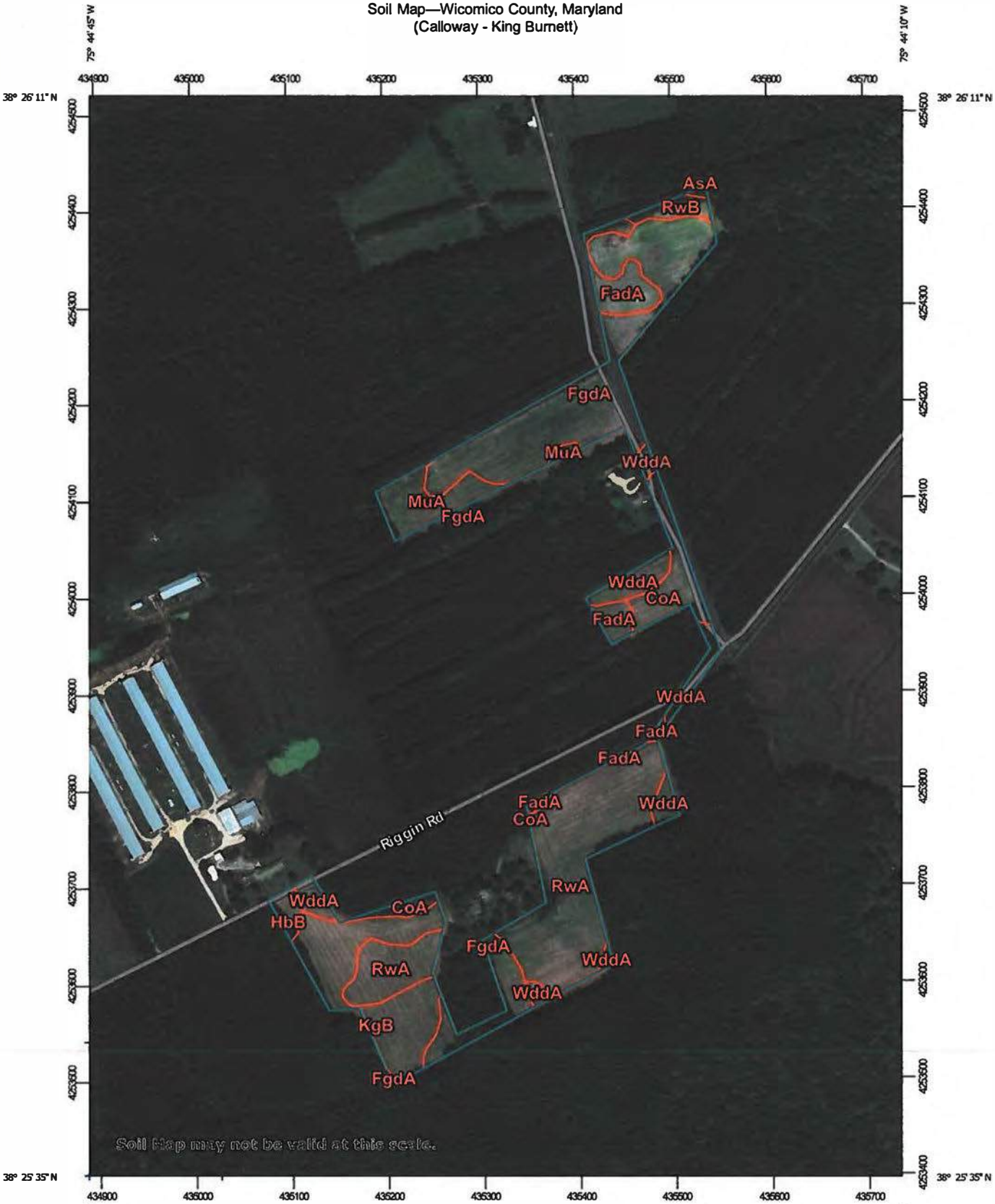
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	1.6	4.9%
EwC	Evesboro sand, 5 to 10 percent slopes	0.6	1.7%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.3	0.9%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.0	0.1%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	4.7	14.2%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.6	1.9%
RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	1.5	4.6%
RsA	Runclint sand, 0 to 2 percent slopes	14.5	43.8%
RsB	Runclint sand, 2 to 5 percent slopes	1.0	3.1%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	3.8	11.4%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	4.5	13.5%
Totals for Area of Interest		**33.1**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - King Burnett)



Map Scale: 1:5,450 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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566

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.0	0.2%
CoA	Corsica mucky loam, 0 to 2 percent slopes	1.4	6.2%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	1.2	5.7%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	6.4	29.5%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	0.3	1.3%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	3.1	14.1%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	1.2	5.4%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	6.3	28.8%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	0.4	1.7%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	1.6	7.1%
Totals for Area of Interest		**21.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway-Burns)

Map Scale: 1:4,270 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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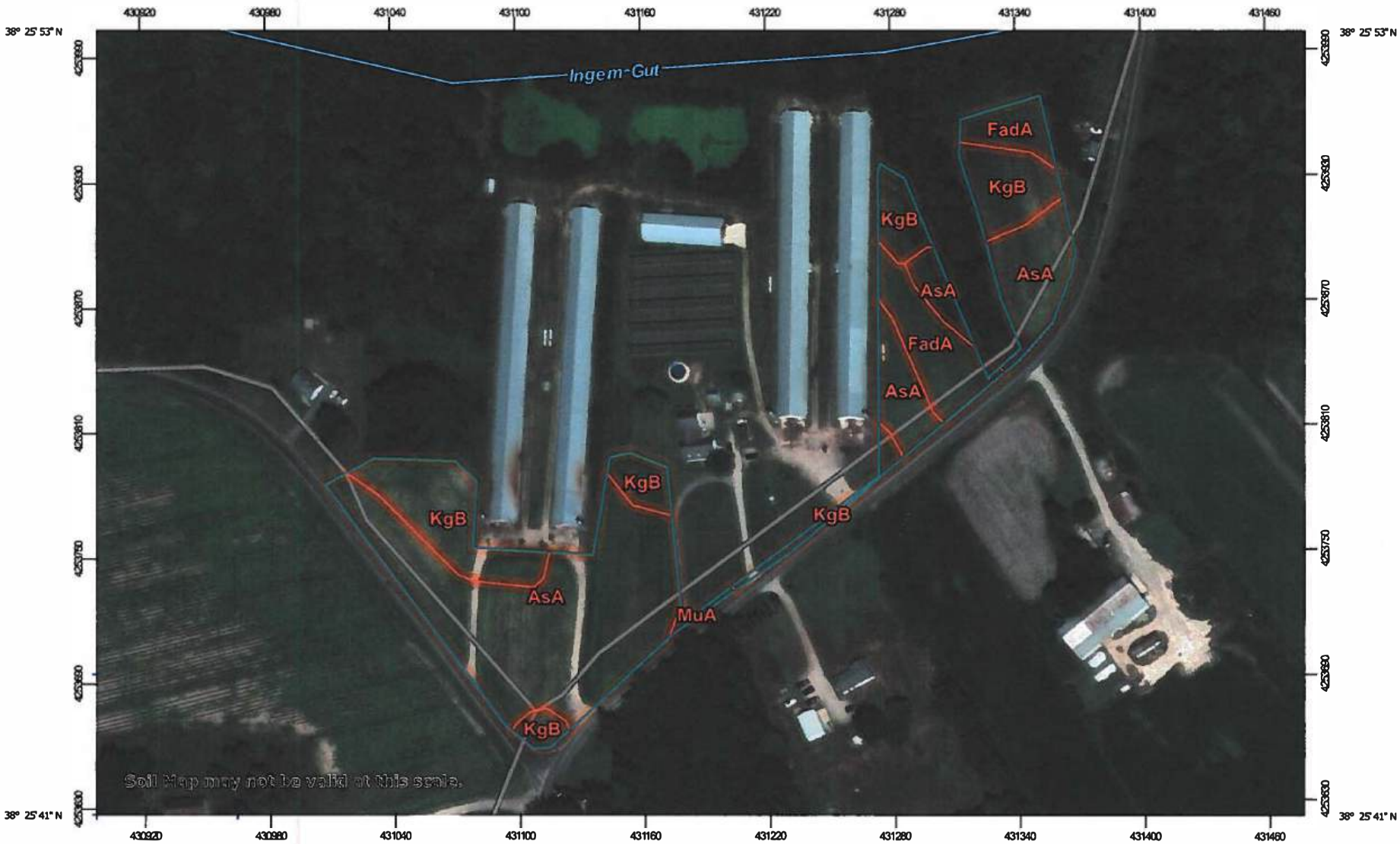
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
KfA	Keyport fine sandy loam, 0 to 2 percent slopes	0.8	1.6%
PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	22.2	44.7%
PrB	Pepperbox-Rockawalkin complex, 2 to 5 percent slopes	12.4	25.1%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	7.0	14.2%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	7.2	14.5%
Totals for Area of Interest		**49.6**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Denise Calloway)



Map Scale: 1:2,650 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

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

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	3.2	58.7%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.7	12.7%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.5	28.2%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.0	0.4%
Totals for Area of Interest		**5.4**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Tommy Calloway)

Map Scale: 1:2,620 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	2.0	11.3%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	2.2	12.2%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	7.0	39.8%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.2	0.9%
RsA	Runclint sand, 0 to 2 percent slopes	1.4	7.7%
RsB	Runclint sand, 2 to 5 percent slopes	0.1	0.7%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	4.8	27.3%
Totals for Area of Interest		**17.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Catlin)

Map Scale: 1:4,170 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	14.0	27.1%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	6.6	12.7%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	16.8	32.4%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	8.1	15.6%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	4.4	8.4%
RsB	Runclint sand, 2 to 5 percent slopes	0.4	0.8%
RuB	Runclint loamy sand, 2 to 5 percent slopes	0.8	1.6%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	0.7	1.4%
Totals for Area of Interest		**51.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Virginia Cloud)

Map Scale: 1:2,670 if printed on A portrait (8.5" x 11") sheet.

N

0 35 70 140 210 Meters

0 100 200 400 600 Feet

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Mar 5, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdA	Cedartown loamy sand, 0 to 2 percent slopes	6.9	27.9%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	9.3	37.7%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	5.0	20.4%
RsA	Runclint sand, 0 to 2 percent slopes	3.5	14.1%
Totals for Area of Interest		**24.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Joe Collins & John Wright)

Map Scale: 1:6,960 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
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- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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584

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EwB	Evesboro sand, 2 to 5 percent slopes	7.3	5.1%
EwC	Evesboro sand, 5 to 10 percent slopes	1.6	1.1%
GaA	Galestown loamy sand, 0 to 2 percent slopes	4.8	3.3%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	12.2	8.5%
Ma	Manahawkin muck, frequently flooded	0.2	0.2%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	34.9	24.1%
RsB	Runclint sand, 2 to 5 percent slopes	15.4	10.7%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	1.2	0.8%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	66.9	46.3%
Totals for Area of Interest		**144.4**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Anitta Corbett & Louise Sheman)

Map Scale: 1:4,980 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

586

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

584

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EwC	Evesboro sand, 5 to 10 percent slopes	0.0	0.0%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	53.8	89.9%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	6.0	10.0%
Totals for Area of Interest		**59.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - McCauley)

Map Scale: 1:3,190 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Slide or Slip
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- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
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- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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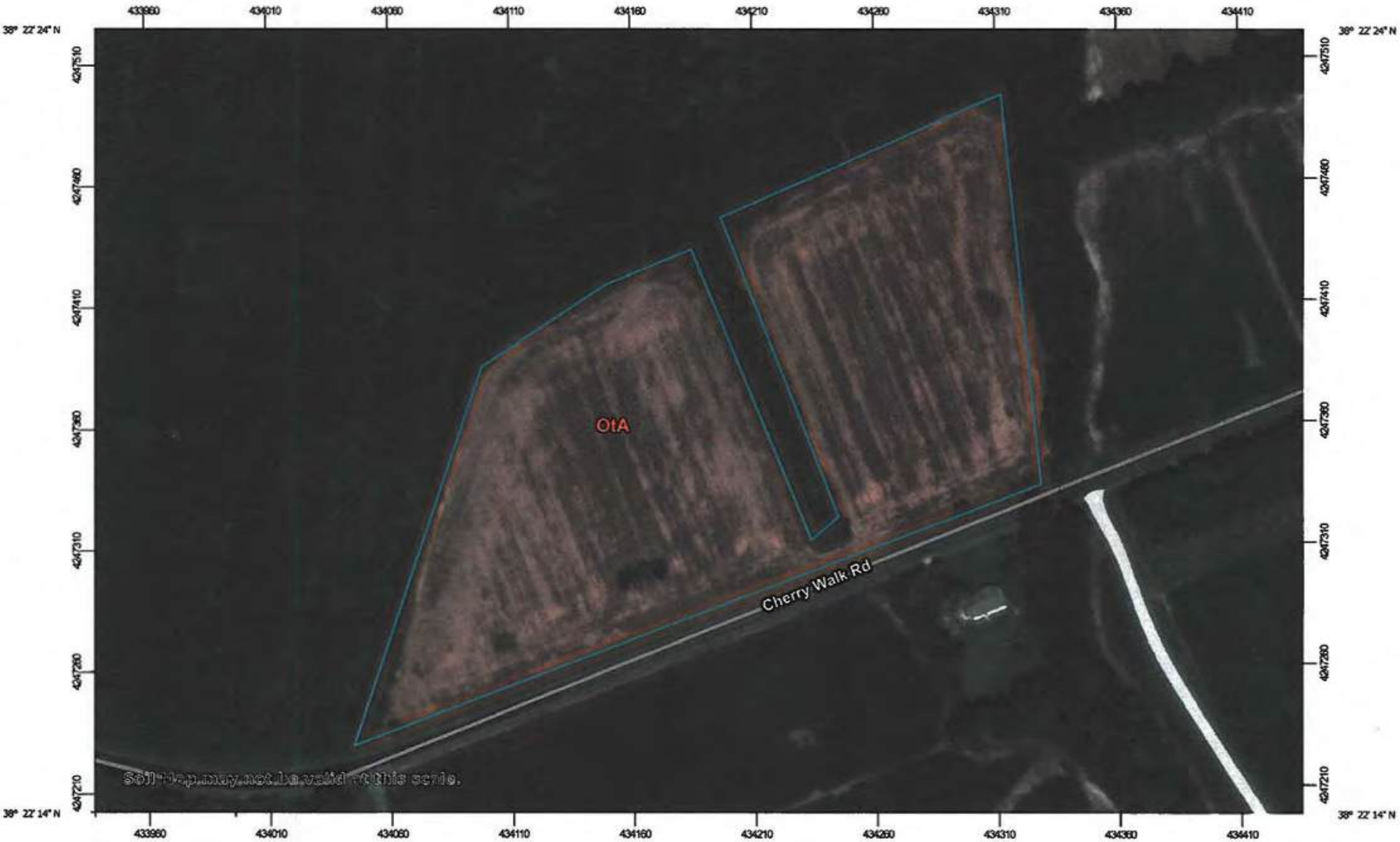
590

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.5	2.1%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	12.4	51.3%
RuB	Runclint loamy sand, 2 to 5 percent slopes	1.2	4.9%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	10.1	41.7%
Totals for Area of Interest		**24.1**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Leonard Dietz)



Map Scale: 1:2,280 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
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- Lava Flow
- Marsh or swamp
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- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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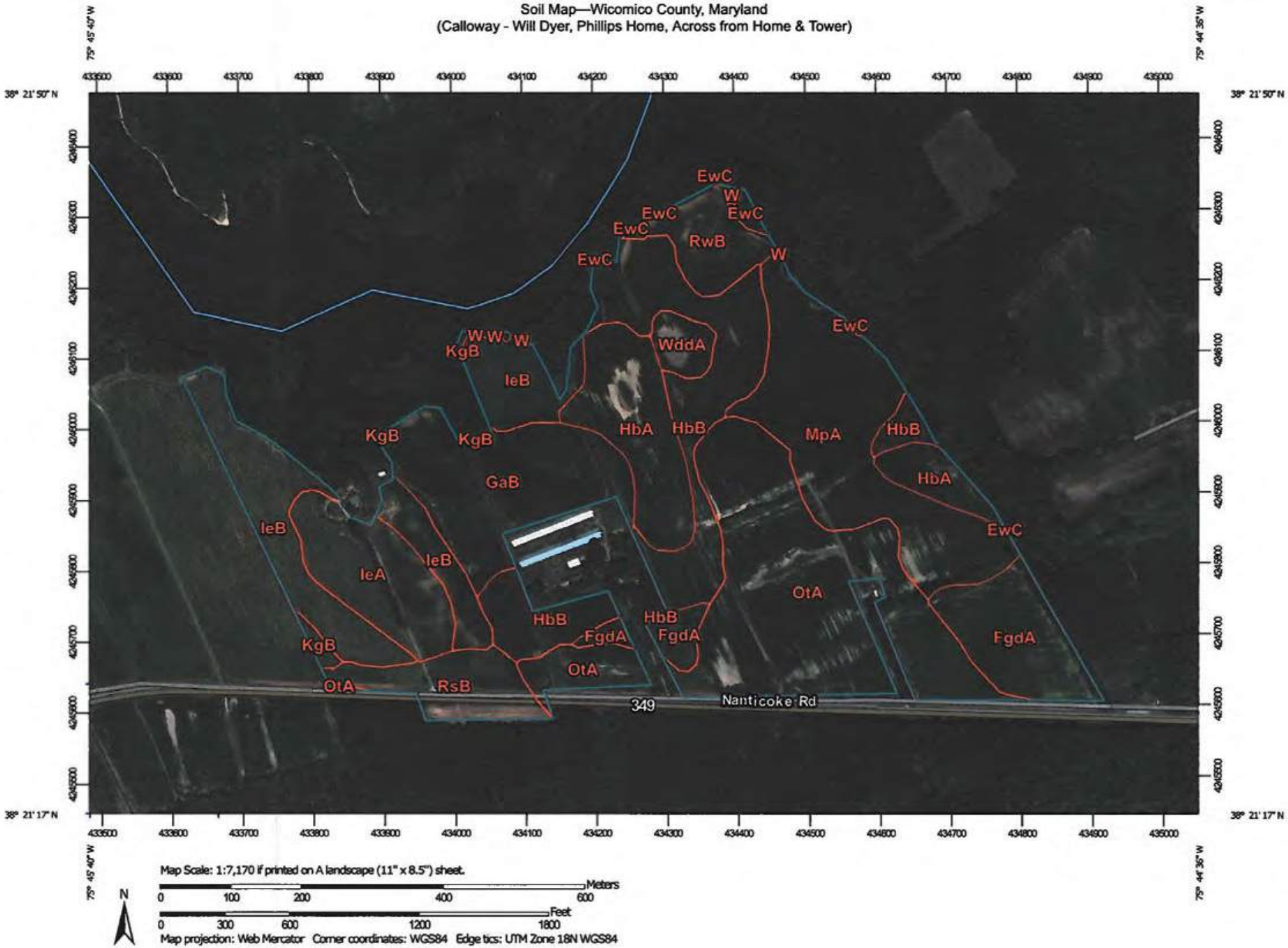
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	9.0	100.0%
Totals for Area of Interest		**9.0**	**100.0%**

595

Soil Map—Wicomico County, Maryland
(Calloway - Will Dyer, Phillips Home, Across from Home & Tower)



Map Scale: 1:7,170 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
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- Rock Outcrop
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- Severely Eroded Spot
- Sinkhole
- Slide or Slip
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- Stony Spot
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- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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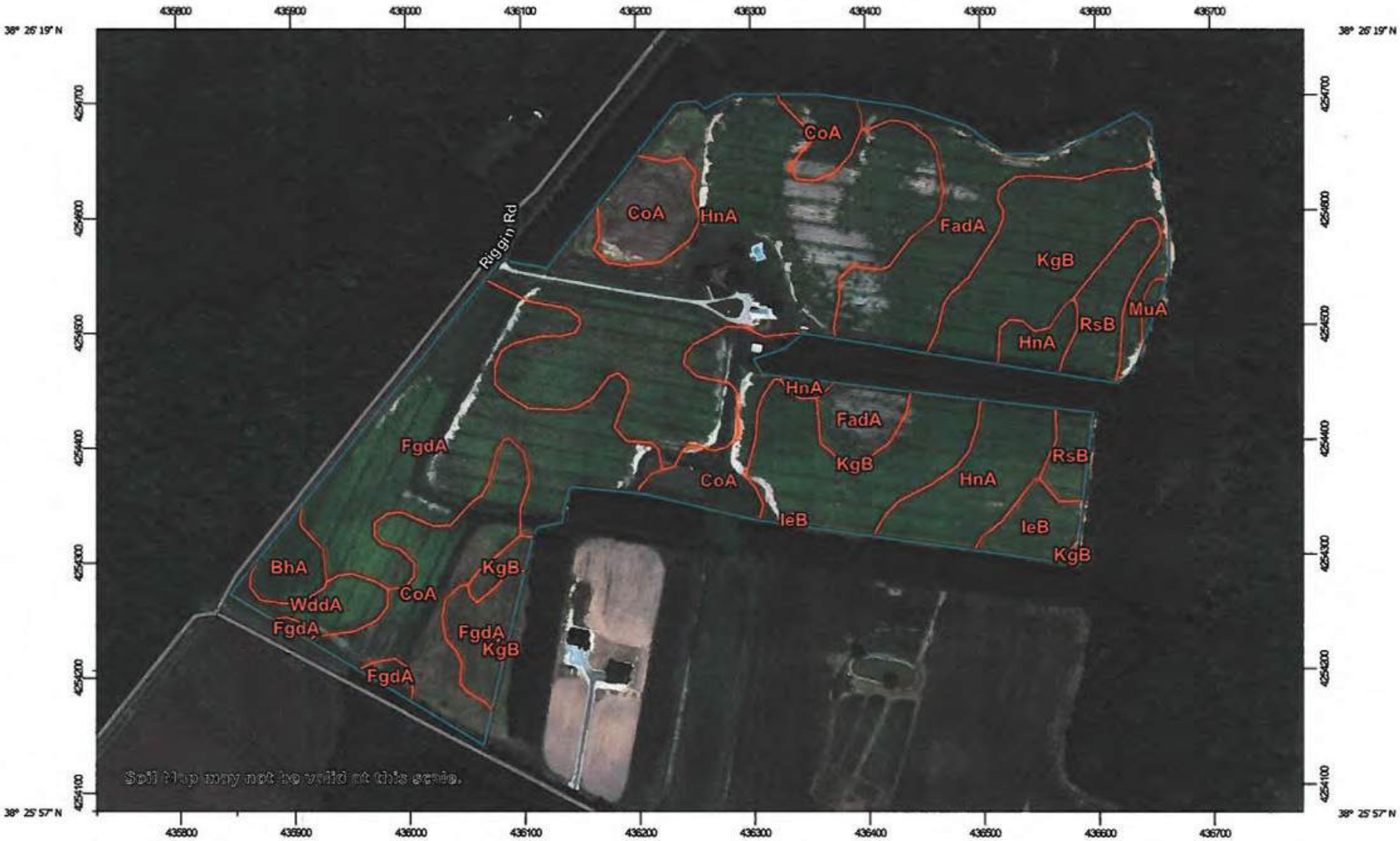
596

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EwC	Evesboro sand, 5 to 10 percent slopes	0.5	0.4%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	8.4	6.8%
GaB	Galestown loamy sand, 2 to 5 percent slopes	12.0	9.8%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	10.1	8.2%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	15.7	12.8%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	7.3	6.0%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	14.5	11.9%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.5	0.4%
MpA	Mattapex fine sandy loam, 0 to 2 percent slopes	16.8	13.7%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	25.9	21.2%
RsB	Runclint sand, 2 to 5 percent slopes	4.8	3.9%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	4.0	3.2%
W	Water	0.2	0.2%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	1.6	1.3%
Totals for Area of Interest		**122.1**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - John Edwards)



Map Scale: 1:4,800 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
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- Slide or Slip
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- Wet Spot
- Other
- Special Line Features

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- Streams and Canals

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- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

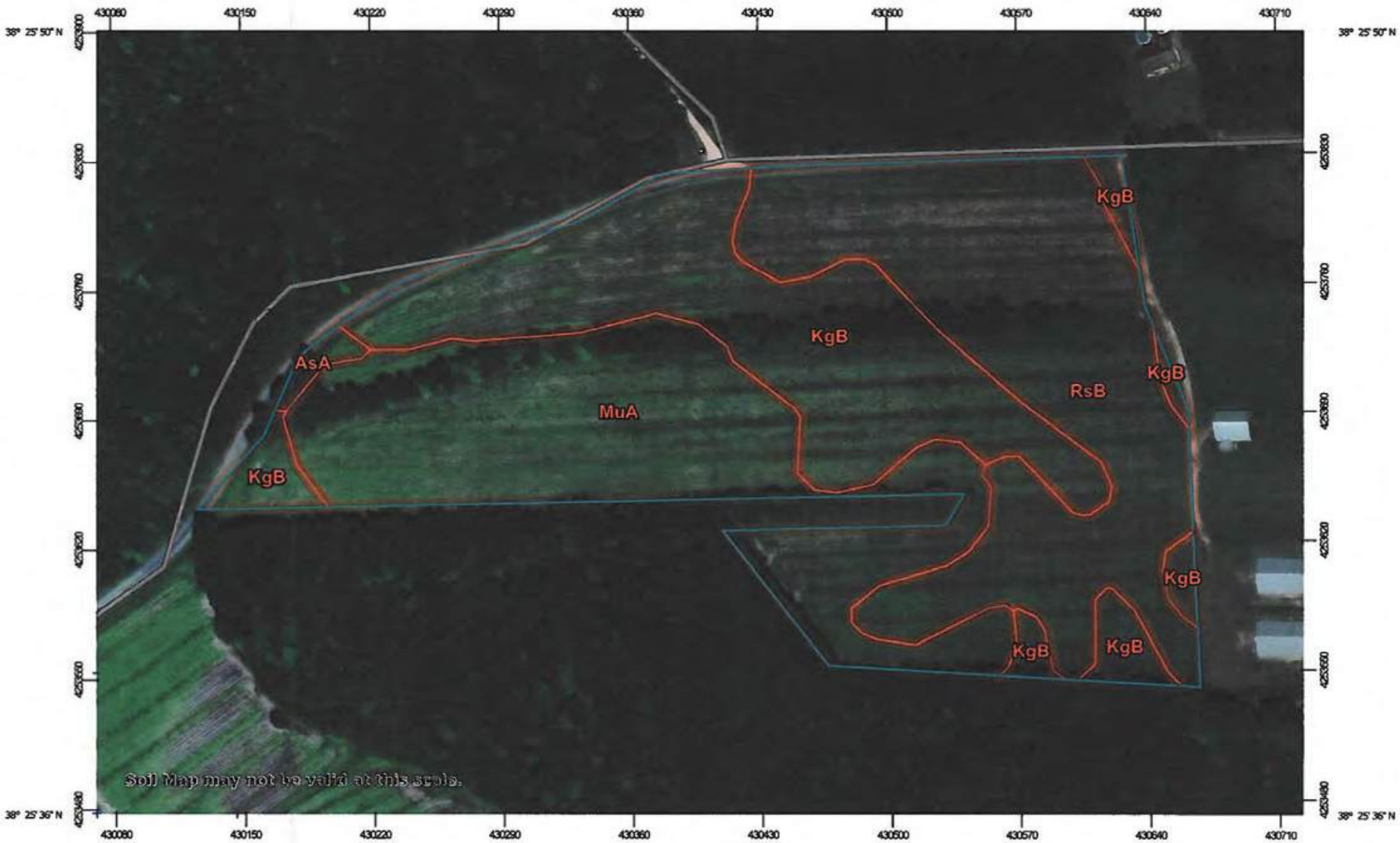
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

599

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	0.8	1.5%
CoA	Corsica mucky loam, 0 to 2 percent slopes	8.5	15.2%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	5.8	10.2%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	10.1	18.0%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	17.8	31.6%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	1.0	1.8%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	9.1	16.1%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.1	0.3%
RsB	Runclint sand, 2 to 5 percent slopes	2.0	3.6%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	1.0	1.7%
Totals for Area of Interest		**56.3**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Robert Eichelberger)



Map Scale: 1:2,990 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

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

101

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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602

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.2	0.8%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	7.7	32.0%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	7.9	32.7%
RsB	Runclint sand, 2 to 5 percent slopes	8.3	34.4%
Totals for Area of Interest		**24.0**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Elliot & Hunt Club)

Map Scale: 1:6,080 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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605

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	1.9	2.3%
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	2.2	2.6%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	10.4	12.3%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	15.3	18.0%
GaB	Galestown loamy sand, 2 to 5 percent slopes	0.0	0.0%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	10.7	12.7%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	3.9	4.6%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	6.5	7.7%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	6.5	7.7%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	1.9	2.2%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	9.9	11.7%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	15.4	18.2%
Totals for Area of Interest		**84.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Jeff Gambrill)

Map Scale: 1:1,890 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

608

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	1.7	28.5%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	4.3	71.5%
Totals for Area of Interest		**6.0**	**100.0%**

609

Soil Map—Wicomico County, Maryland
(Calloway - Tracy Green, Freed Schnoor & Spear)

Map Scale: 1:4,080 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 19, 2017

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Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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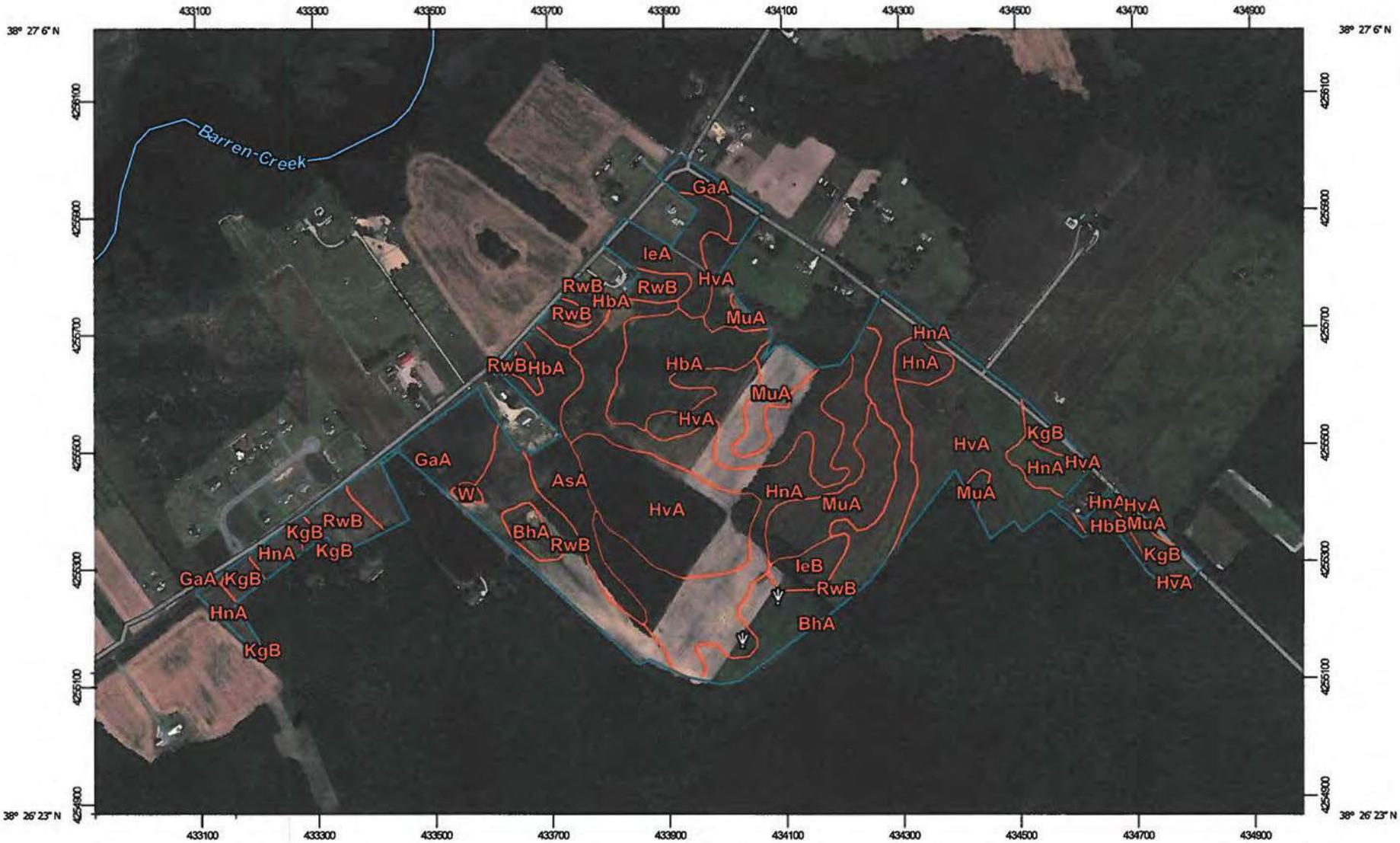
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GaB	Galestown loamy sand, 2 to 5 percent slopes	10.7	28.4%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	1.6	4.3%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	7.9	21.1%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.8	4.8%
RsA	Runclint sand, 0 to 2 percent slopes	0.4	1.1%
RsB	Runclint sand, 2 to 5 percent slopes	2.5	6.5%
RuB	Runclint loamy sand, 2 to 5 percent slopes	7.6	20.2%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	5.1	13.6%
Totals for Area of Interest		**37.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Faye Hatton, Nan, Sandra Saulsbury & Phillis Webster-Brad)



Map Scale: 1:9,450 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

N

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

613

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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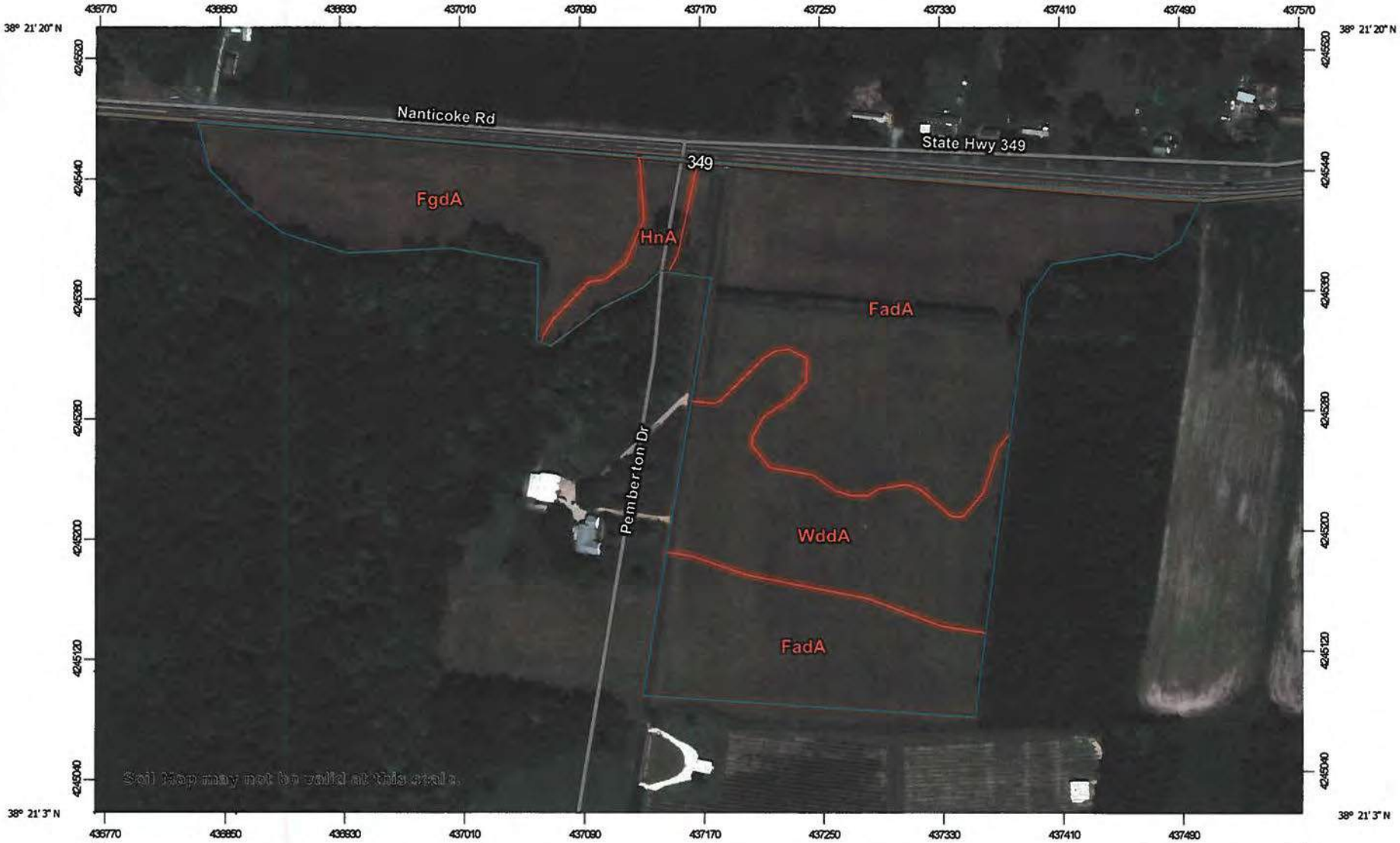
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	6.6	5.1%
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	1.4	1.1%
GaA	Galestown loamy sand, 0 to 2 percent slopes	8.1	6.2%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	9.7	7.4%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	0.8	0.6%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	26.7	20.4%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	34.3	26.2%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	4.4	3.3%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	1.9	1.4%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	3.8	2.9%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	9.5	7.3%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	23.1	17.7%
W	Water	0.4	0.3%
Totals for Area of Interest		**130.6**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Hensley)



Map Scale: 1:3,690 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

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

616

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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617

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	15.8	58.5%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	5.4	20.0%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.9	3.4%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	4.9	18.1%
Totals for Area of Interest		**27.0**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Bill Hochmuth)

Map Scale: 1:3,340 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

020

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EwC	Evesboro sand, 5 to 10 percent slopes	4.0	13.2%
GaA	Galestown loamy sand, 0 to 2 percent slopes	1.2	3.9%
GaB	Galestown loamy sand, 2 to 5 percent slopes	5.5	18.3%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	2.8	9.3%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	8.2	27.2%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	7.7	25.6%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	0.7	2.5%
Totals for Area of Interest		**30.2**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Home)

Map Scale: 1:11,400 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

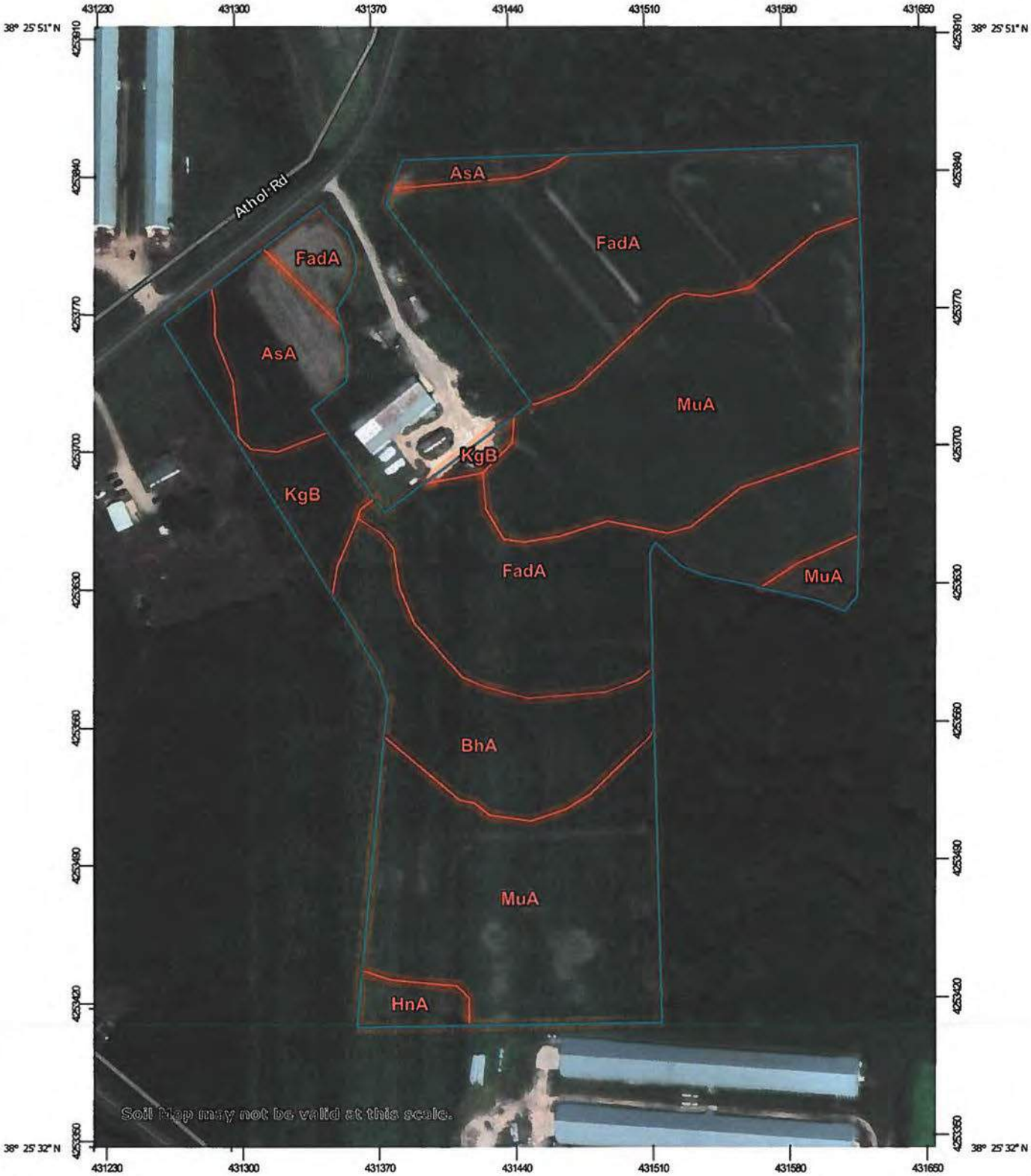
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

623

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	5.4	2.7%
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	15.2	7.7%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	39.0	19.6%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	19.7	9.9%
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	3.1	1.6%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	4.4	2.2%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	20.6	10.4%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	8.3	4.2%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	3.2	1.6%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	11.1	5.6%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	48.8	24.6%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0.2	0.1%
RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	12.2	6.2%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	0.6	0.3%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	0.9	0.4%
W	Water	0.0	0.0%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	2.1	1.1%
Zk	Zekiah silt loam, frequently flooded	3.6	1.8%
Totals for Area of Interest		**198.6**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Dougs Home)



Map Scale: 1:2,780 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

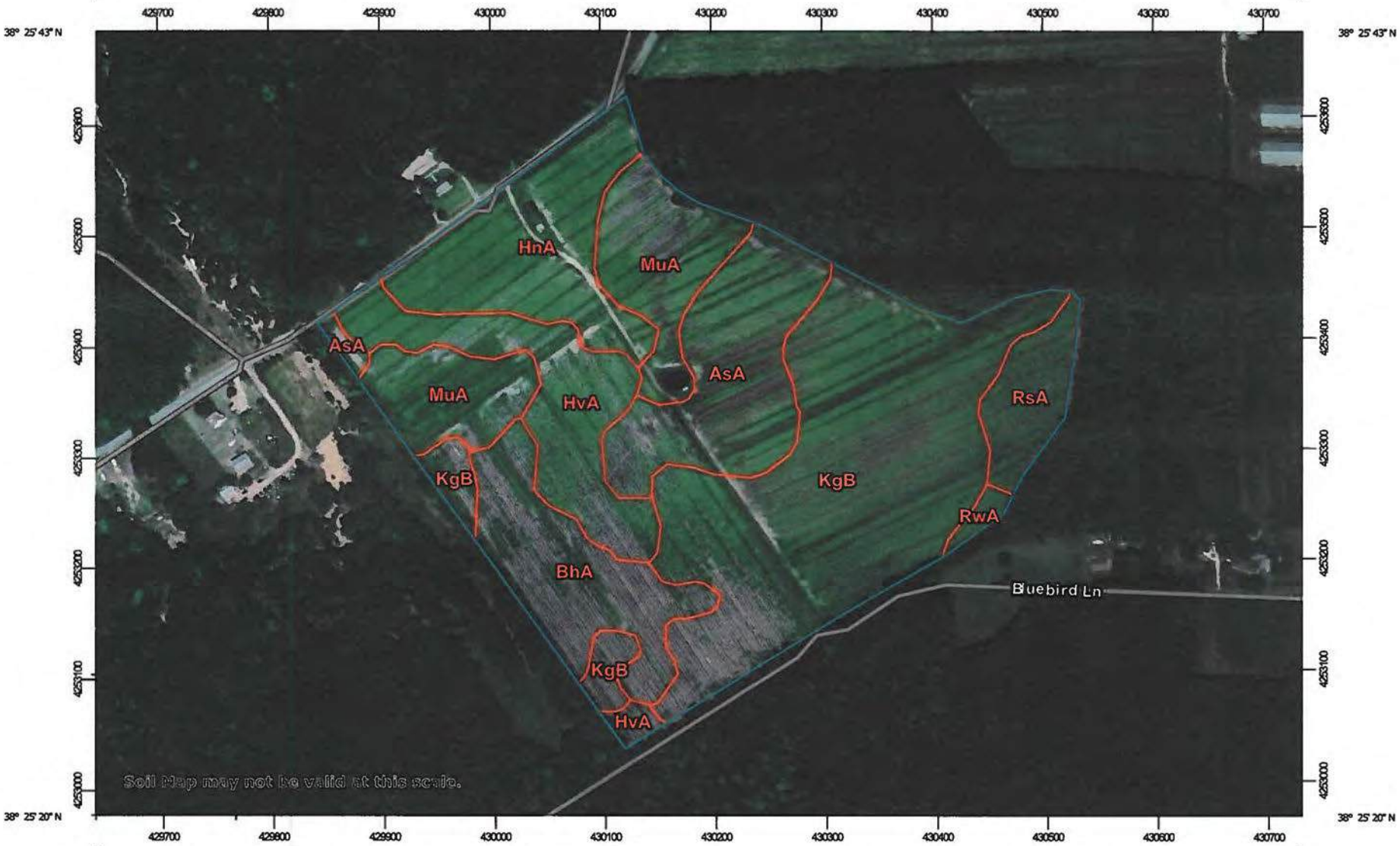
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

626

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	1.4	6.3%
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	2.4	10.5%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	8.5	37.7%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.3	1.4%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.0	4.6%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	8.9	39.4%
Totals for Area of Interest		**22.6**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Home Tank)



Map Scale: 1:4,990 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

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

628

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

629

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	6.6	12.7%
BhA	Berryland mucky loamy sand, 0 to 2 percent slopes	5.5	10.5%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	6.4	12.2%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	5.8	11.2%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	18.5	35.5%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	6.7	12.9%
RsA	Runclint sand, 0 to 2 percent slopes	2.2	4.3%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	0.3	0.7%
Totals for Area of Interest		**52.0**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - George Johnson)

Map Scale: 1:2,290 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

631

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

632

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	3.0	26.1%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	2.9	24.8%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	5.7	49.1%
Totals for Area of Interest		**11.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Johnson Upper Ferry & White)

Map Scale: 1:5,790 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

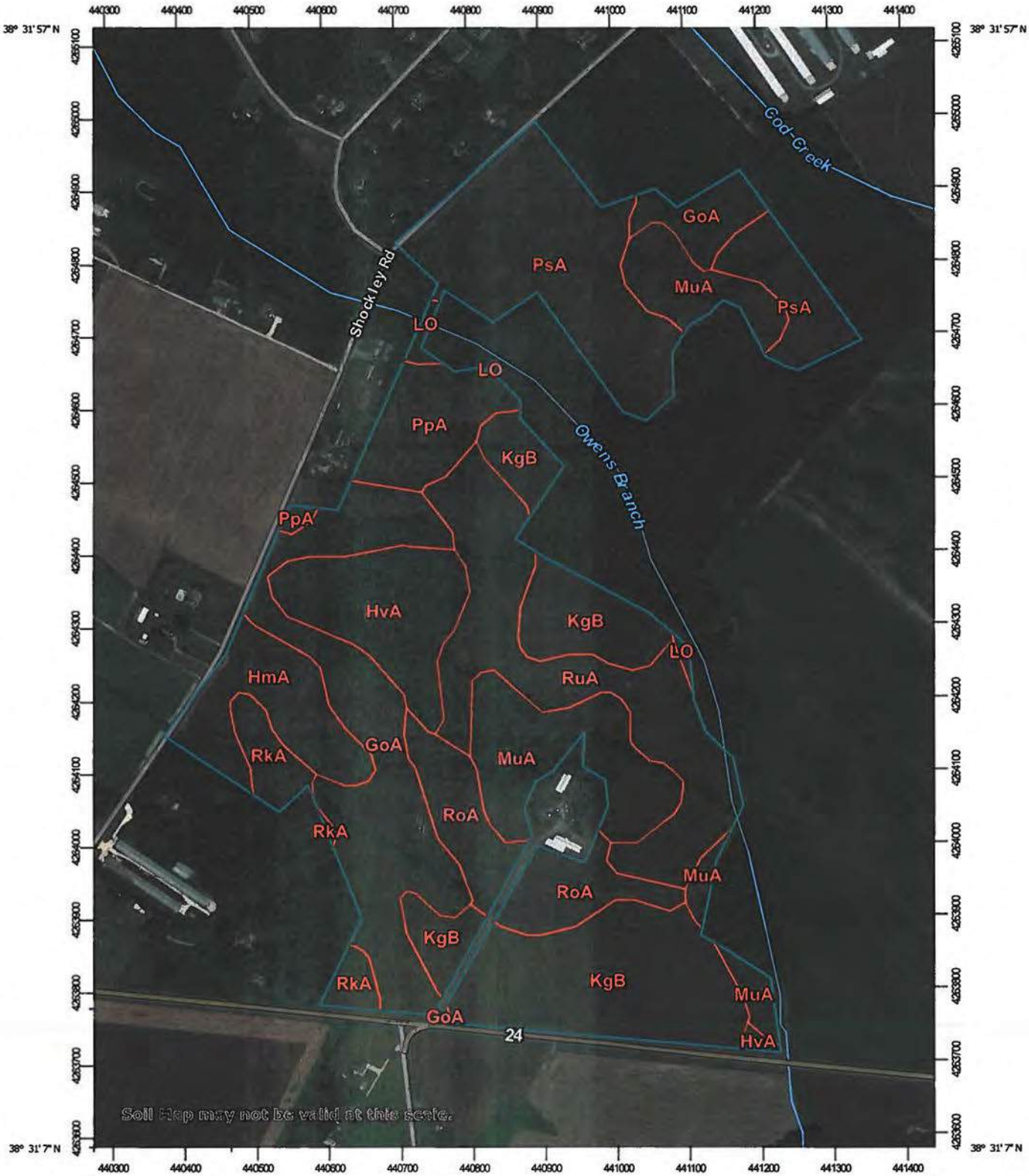
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

635

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HnA	Hammonton sandy loam, 0 to 2 percent slopes	39.8	67.9%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	18.8	32.1%
Totals for Area of Interest		**58.6**	**100.0%**

Soil Map—Sussex County, Delaware
(Calloway - Gary Leslie)



Map Scale: 1:7,500 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
Survey Area Data: Version 18, Nov 13, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

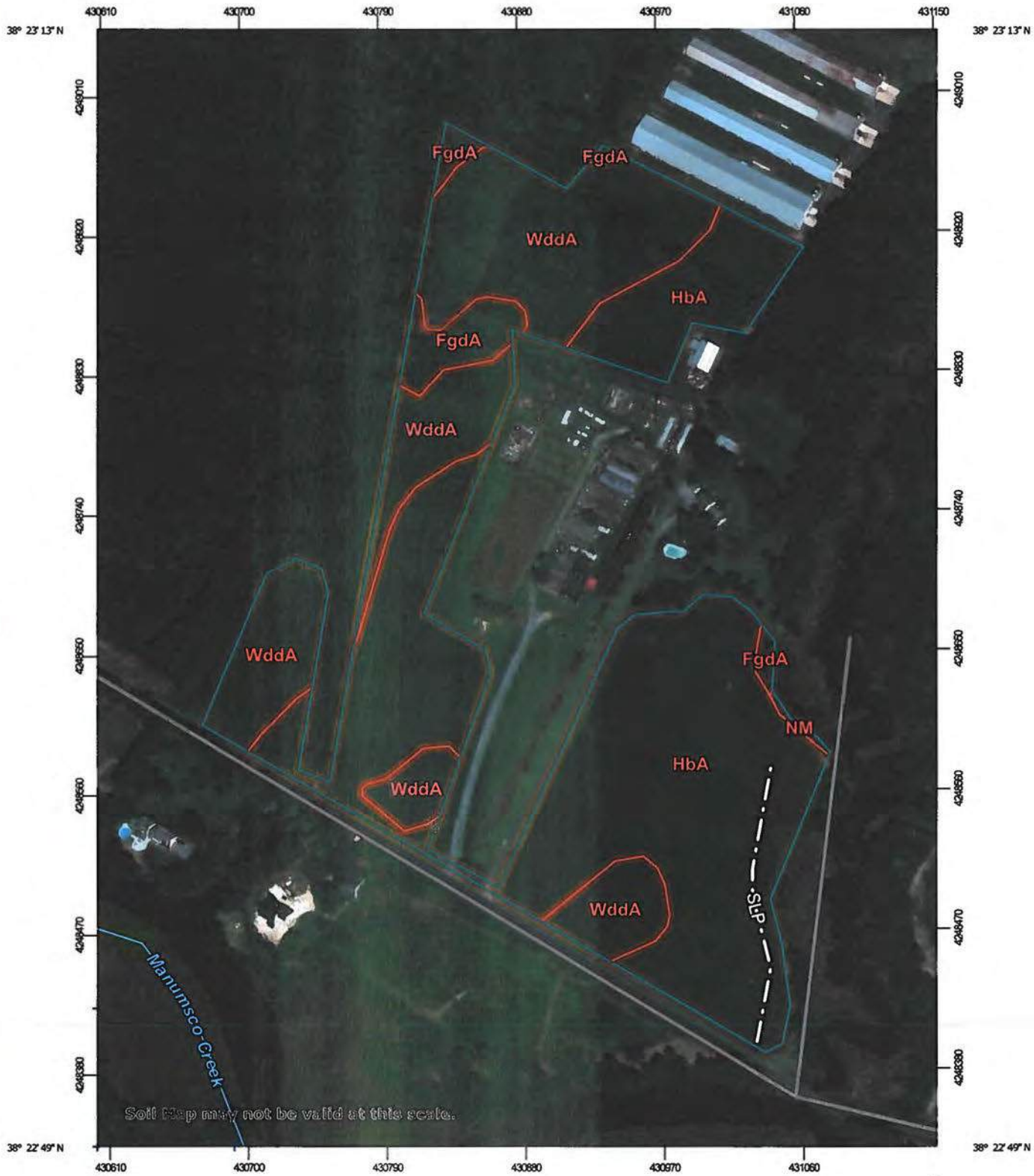
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

638

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GoA	Glassboro sandy loam, 0 to 2 percent slopes	21.5	15.6%
HmA	Hammonton loamy sand, 0 to 2 percent slopes	7.8	5.6%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	9.6	6.9%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	24.1	17.4%
LO	Longmarsh and Indiantown soils, frequently flooded	0.6	0.4%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	15.8	11.4%
PpA	Pepperbox loamy sand, 0 to 2 percent slopes	6.4	4.6%
PsA	Pepperbox-Rosedale complex, 0 to 2 percent slopes	22.0	15.9%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	3.5	2.6%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	9.0	6.5%
RuA	Runclint loamy sand, 0 to 2 percent slopes	18.1	13.1%
Totals for Area of Interest		**138.6**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Pat Moore)



Map Scale: 1:3,510 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

641

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	1.0	4.4%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	13.8	60.5%
NM	Nanticoke and Mannington soils, very frequently flooded, tidal	0.0	0.2%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	8.0	34.9%
Totals for Area of Interest		**22.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - April Shiles)

Map Scale: 1:2,280 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

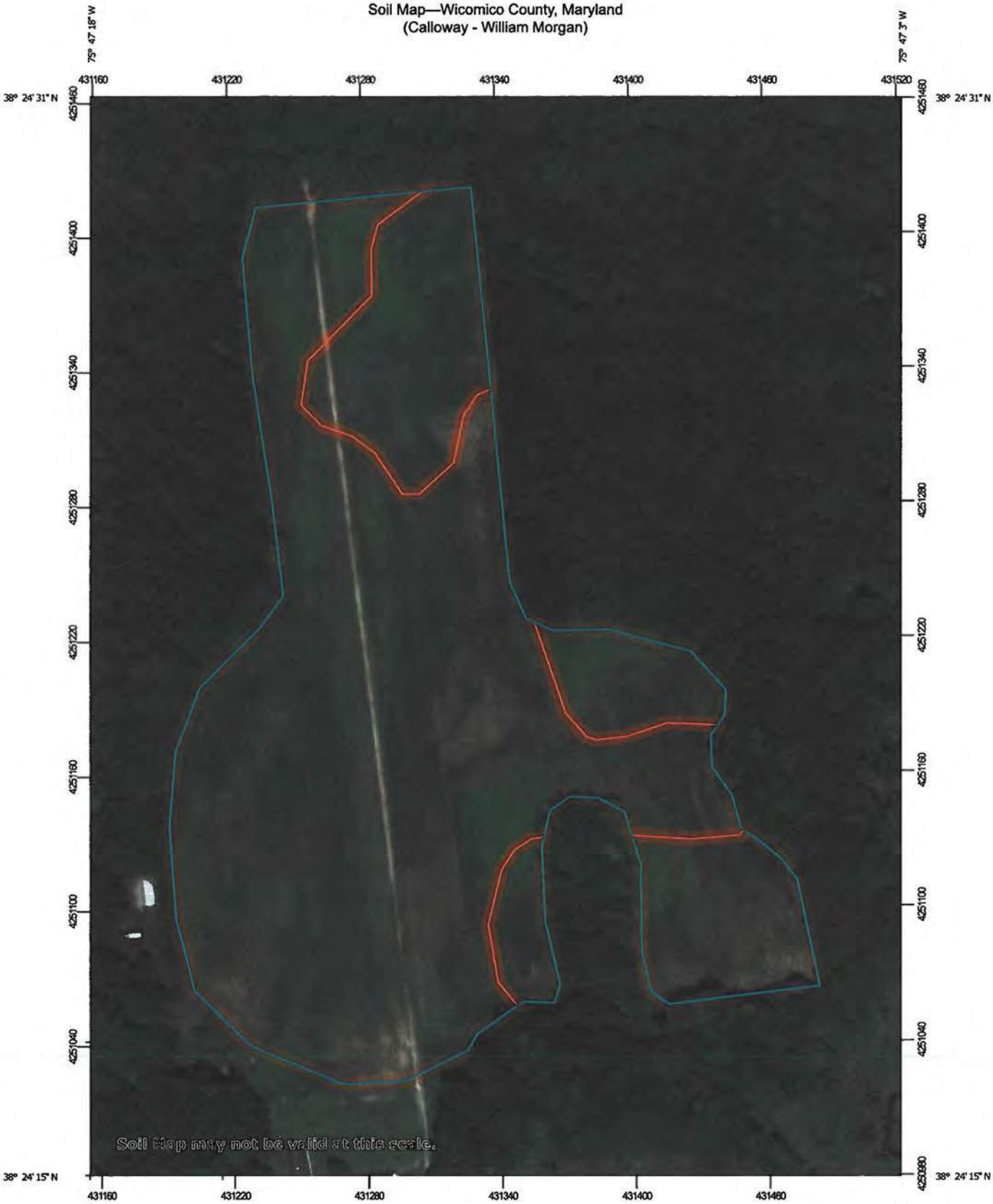
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

044

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HnA	Hammonton sandy loam, 0 to 2 percent slopes	2.7	24.0%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.4	3.6%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	1.4	12.2%
RsA	Runclint sand, 0 to 2 percent slopes	5.1	45.1%
RsB	Runclint sand, 2 to 5 percent slopes	1.6	14.1%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	0.1	1.1%
Totals for Area of Interest		**11.2**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - William Morgan)



Map Scale: 1:2,340 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

647

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	2.5	16.3%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	11.2	72.9%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	1.7	10.8%
Totals for Area of Interest		**15.3**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Todd)

Map Scale: 1:2,360 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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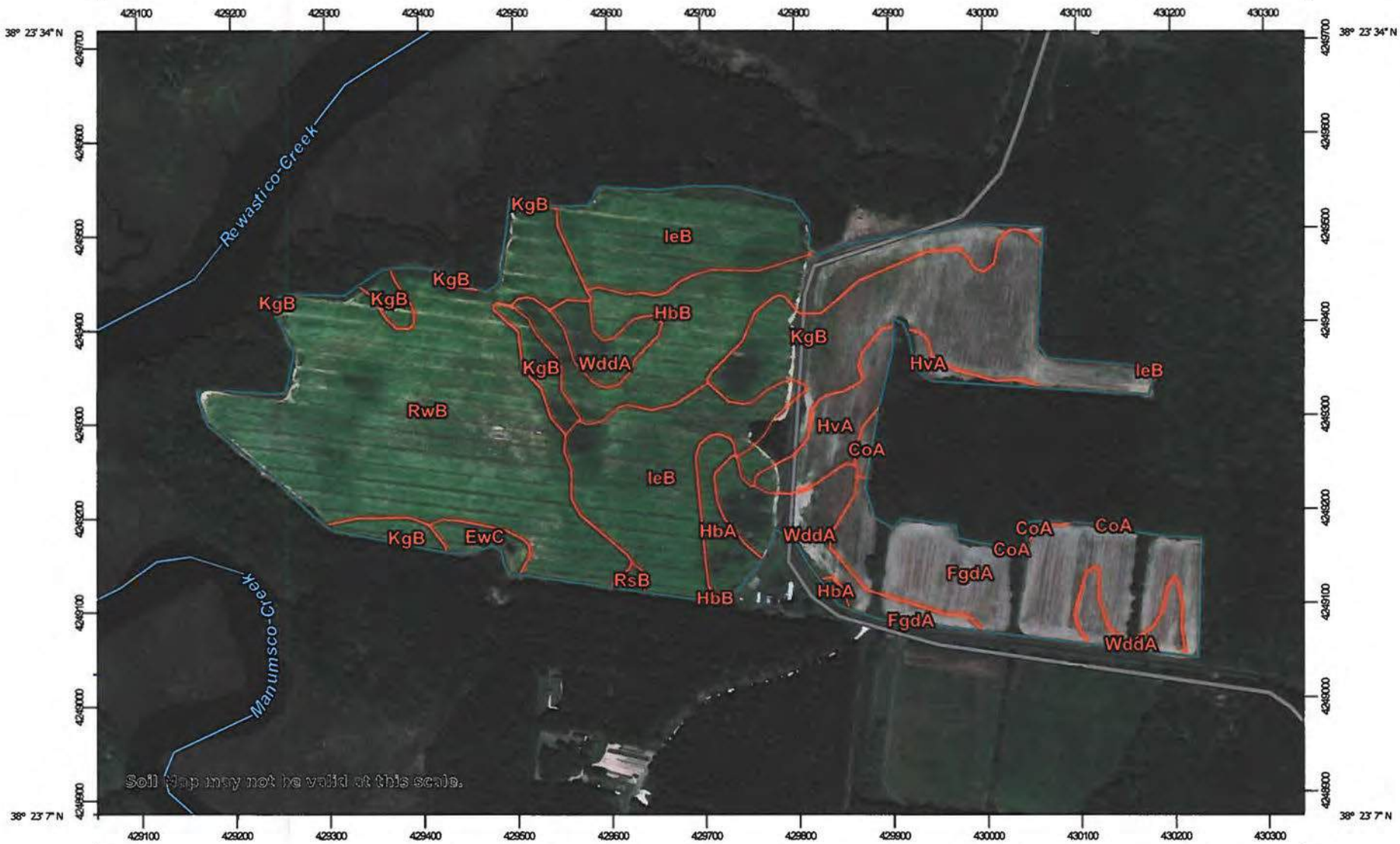
450

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.8	6.0%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	2.9	21.4%
NM	Nanticoke and Mannington soils, very frequently flooded, tidal	0.0	0.0%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	7.7	57.2%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	2.1	15.4%
Totals for Area of Interest		**13.5**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Allen & Frances Owens)



Map Scale: 1:5,880 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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

652

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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653

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CoA	Corsica mucky loam, 0 to 2 percent slopes	0.3	0.4%
EwC	Evesboro sand, 5 to 10 percent slopes	0.7	1.0%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	9.1	12.2%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	1.5	2.0%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	7.6	10.3%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	2.7	3.6%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	12.7	17.1%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	12.4	16.7%
RsB	Runclint sand, 2 to 5 percent slopes	0.2	0.2%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	21.4	28.8%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	5.7	7.6%
Totals for Area of Interest		**74.3**	**100.0%**

Soil Map—Dorchester County, Maryland
(Calloway - Bill Palechek 3227)

Map Scale: 1:6,410 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dorchester County, Maryland
Survey Area Data: Version 17, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

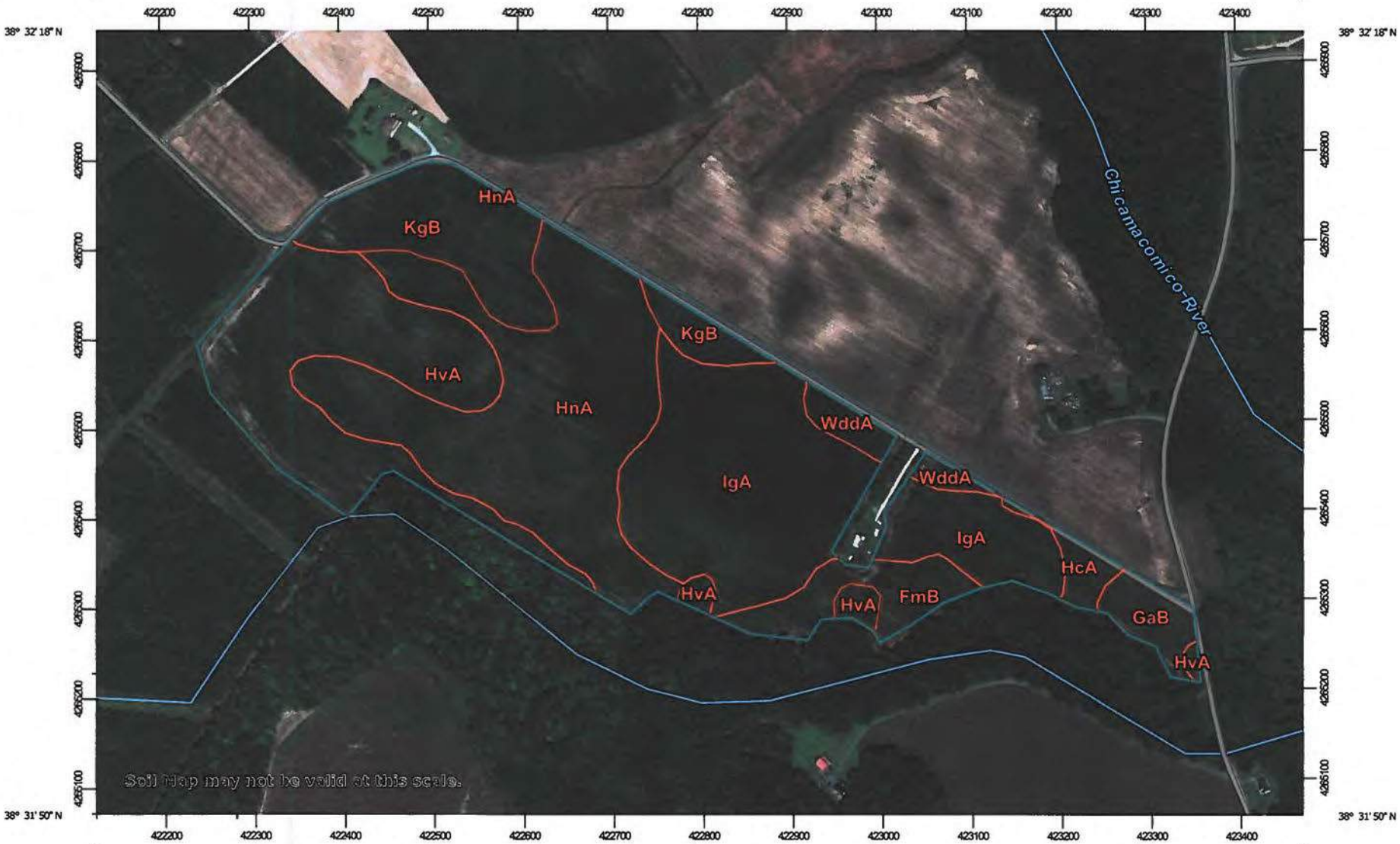
Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ch	Chicone mucky silt loam, frequently flooded	0.3	0.3%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	39.7	32.6%
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	11.1	9.1%
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	63.2	51.8%
IgA	Ingleside sandy loam, 0 to 2 percent slopes	2.4	2.0%
IgB	Ingleside sandy loam, 2 to 5 percent slopes	5.2	4.2%
Totals for Area of Interest		**121.9**	**100.0%**

Soil Map—Dorchester County, Maryland
(Calloway - Bill Palechek 2570)



Map Scale: 1:6,160 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

N

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

658

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Dorchester County, Maryland
Survey Area Data: Version 17, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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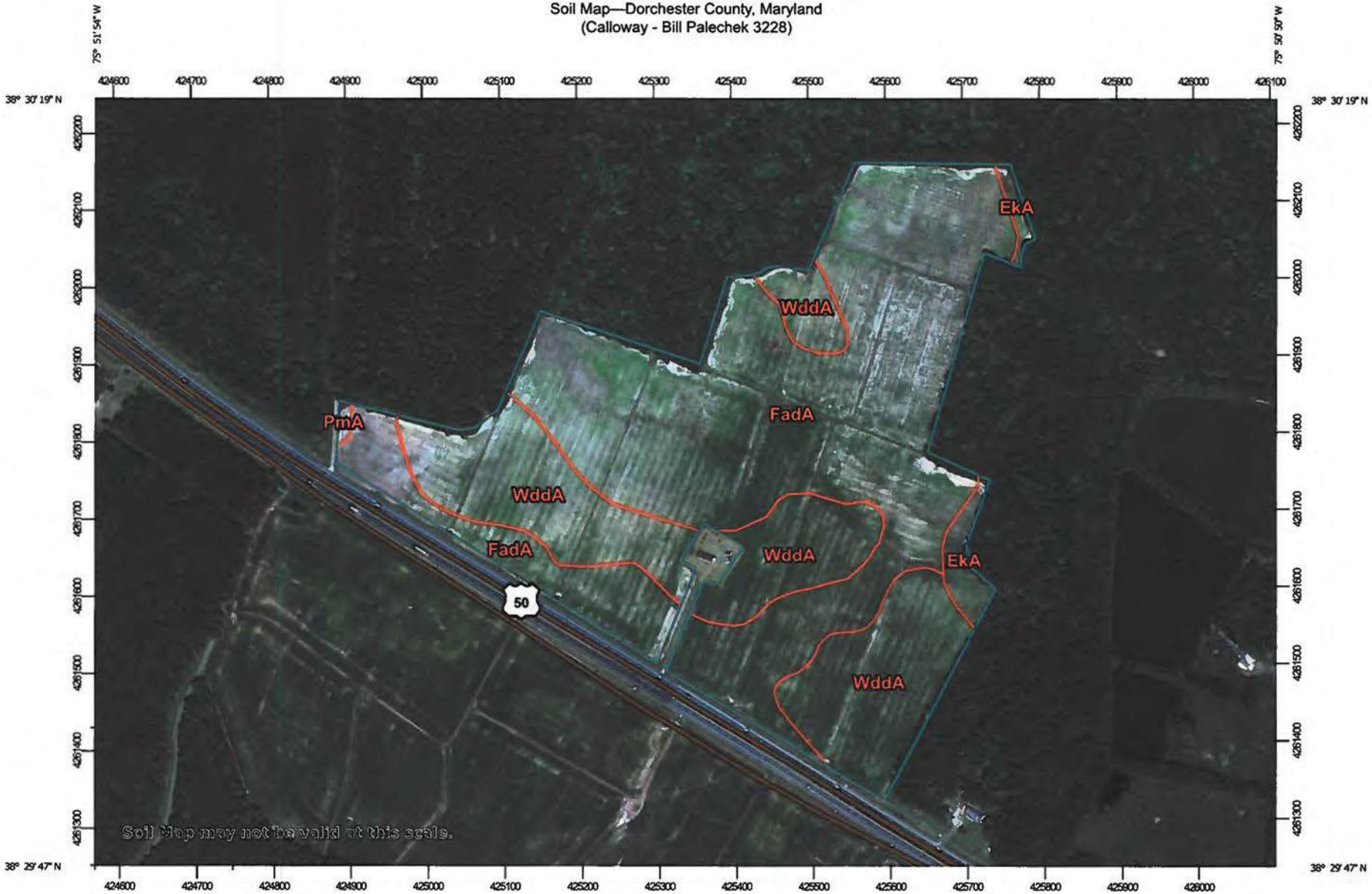
659

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	3.2	4.8%
GaB	Galestown loamy sand, 2 to 5 percent slopes	1.7	2.6%
HcA	Hambrook loam, 0 to 2 percent slopes	1.0	1.5%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	19.4	28.9%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	14.4	21.4%
IgA	Ingleside sandy loam, 0 to 2 percent slopes	18.1	27.0%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	7.8	11.6%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	1.5	2.2%
Totals for Area of Interest		**67.2**	**100.0%**

440

Soil Map—Dorchester County, Maryland
(Calloway - Bill Palechek 3228)



Map Scale: 1:7,010 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

N

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

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

2/20/2018
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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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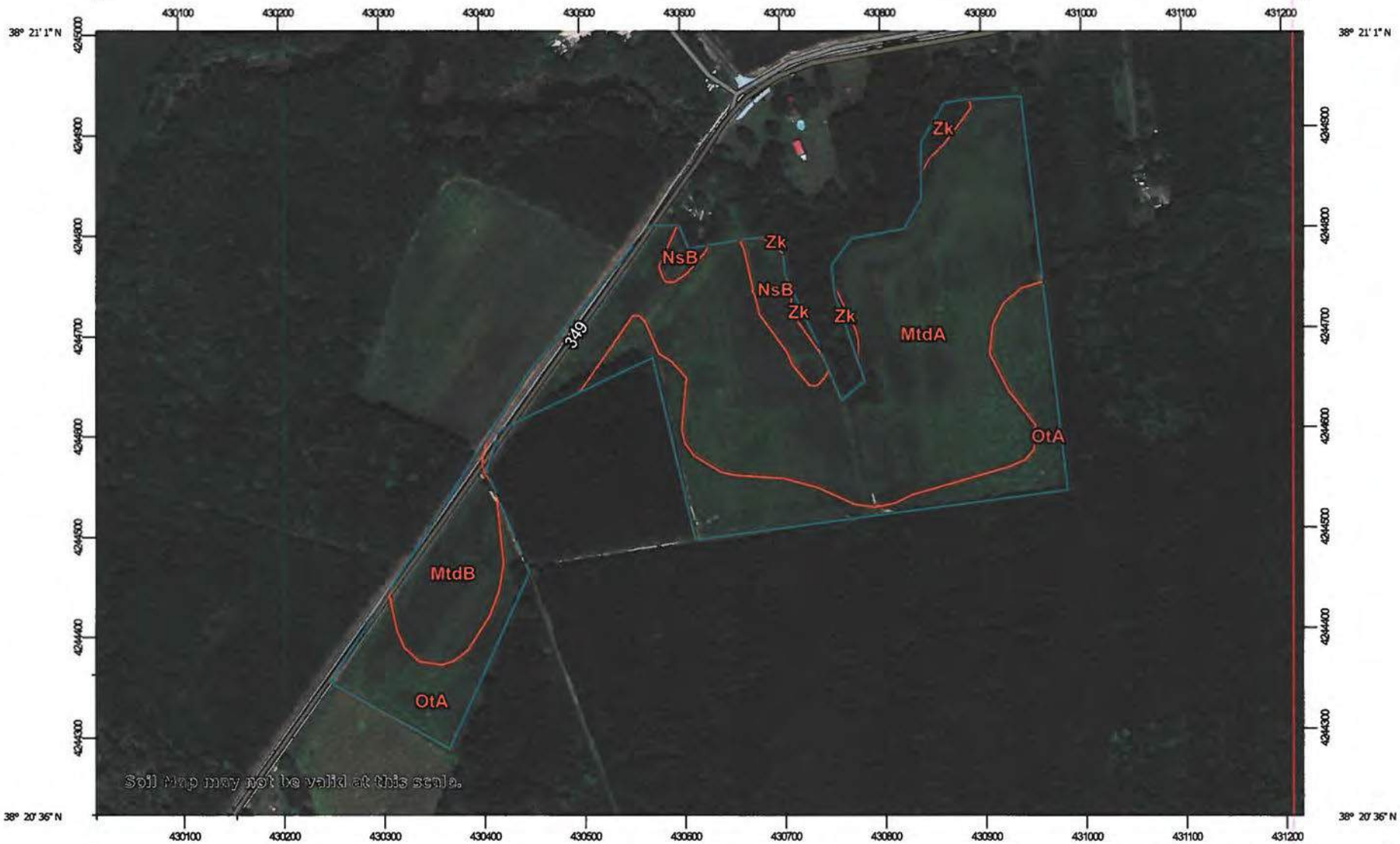
262

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EkA	Elkton loam, 0 to 2 percent slopes	2.1	2.4%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	57.9	65.2%
PmA	Pone mucky loam, 0 to 2 percent slopes	0.2	0.2%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	28.5	32.1%
Totals for Area of Interest		**88.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - B Phillips Daves Sport)



Map Scale: 1:5,510 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

N

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

64

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

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Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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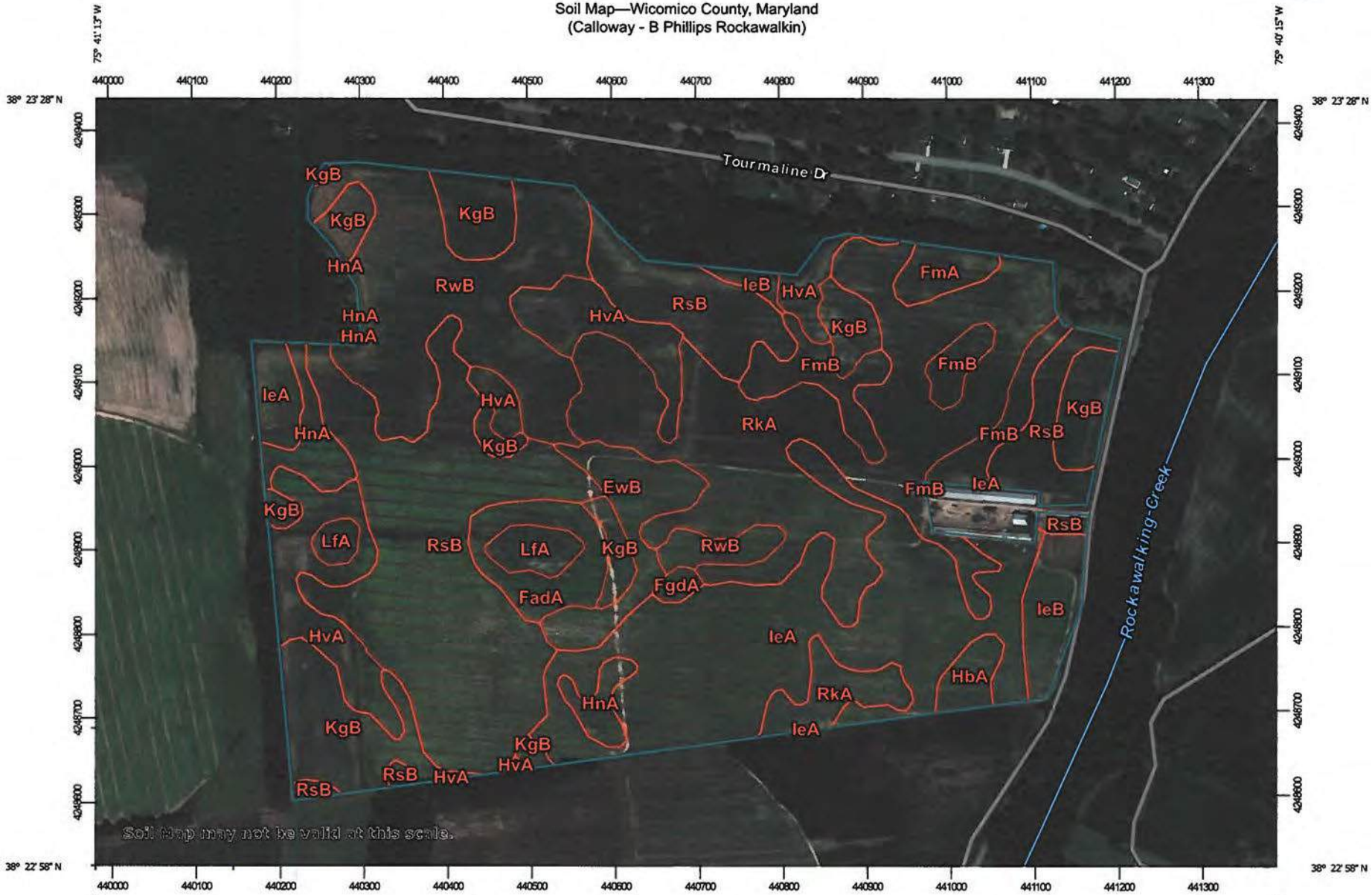
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MtdA	Mattapex silt loam, 0 to 2 percent slopes, Northern Tidewater Area	23.7	60.9%
MtdB	Mattapex silt loam, 2 to 5 percent slopes, Northern Tidewater Area	3.6	9.3%
NsB	Nassawango silt loam, 2 to 5 percent slopes	1.5	4.0%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	9.5	24.4%
Zk	Zekiah silt loam, frequently flooded	0.6	1.5%
Totals for Area of Interest		**38.9**	**100.0%**

666

Soil Map—Wicomico County, Maryland
(Calloway - B Phillips Rockawalkin)



Map Scale: 1:6,440 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

N

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

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
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- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

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Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
EwB	Evesboro sand, 2 to 5 percent slopes	4.1	2.8%
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	3.3	2.3%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	0.4	0.3%
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	1.4	1.0%
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	5.5	3.8%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	1.2	0.8%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	3.0	2.1%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	10.3	7.1%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	23.1	16.0%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	3.1	2.1%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	13.3	9.2%
LfA	Lenni sandy loam, 0 to 2 percent slopes	1.9	1.3%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	27.6	19.1%
RsB	Runclint sand, 2 to 5 percent slopes	29.7	20.5%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	16.6	11.5%
Totals for Area of Interest		**144.5**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - George Phillips - Marks Nutters Neck)

Map Scale: 1:7,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

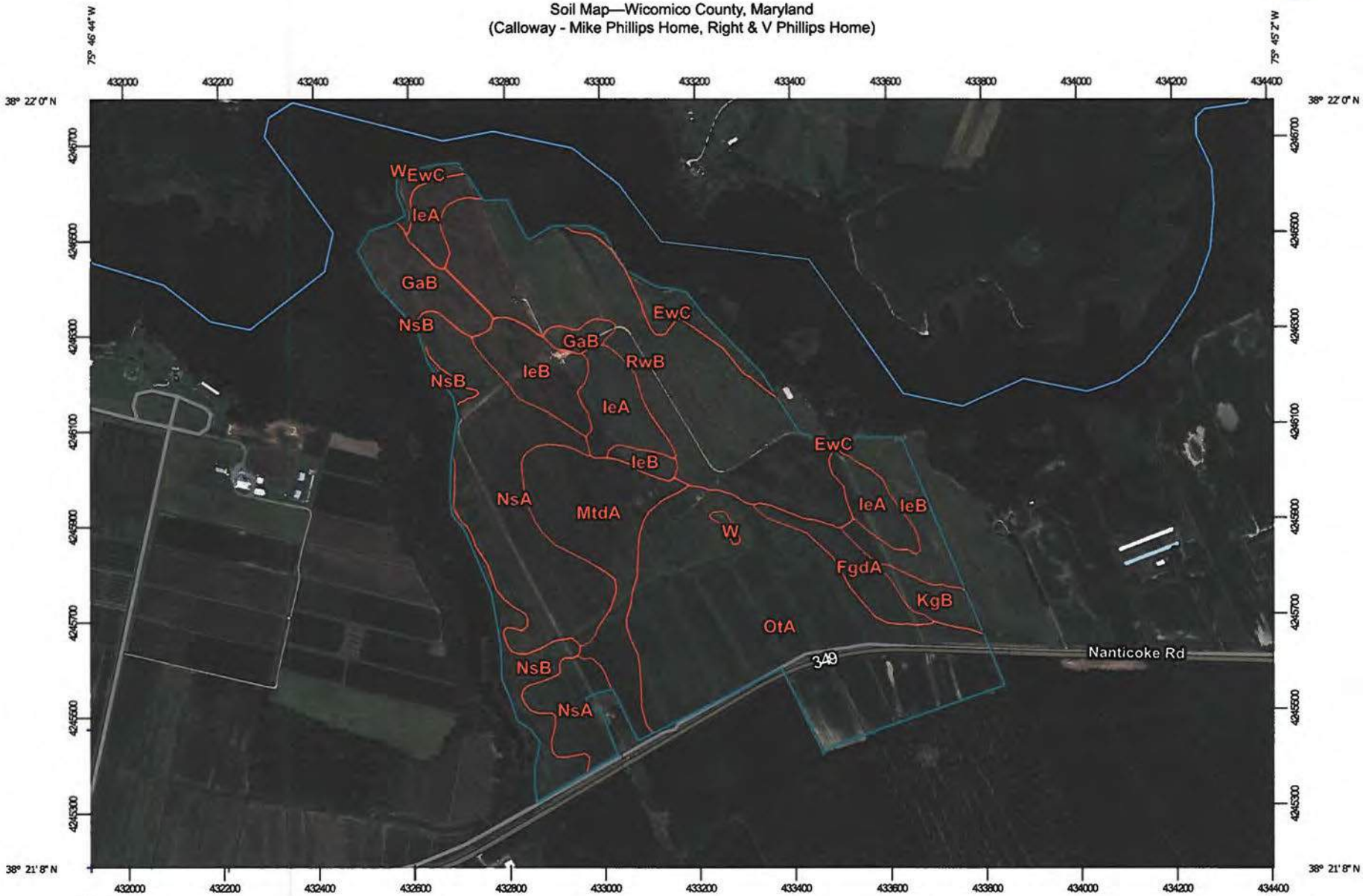
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

174

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	14.5	11.9%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	22.6	18.6%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	2.4	2.0%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	5.0	4.1%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	9.2	7.6%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	7.2	5.9%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	0.8	0.7%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.9	0.7%
NM	Nanticoke and Mannington soils, very frequently flooded, tidal	0.0	0.0%
NnA	Nassawango fine sandy loam, 0 to 2 percent slopes	11.0	9.0%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	32.4	26.6%
RsB	Runclint sand, 2 to 5 percent slopes	2.5	2.0%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	13.3	10.9%
Totals for Area of Interest		**121.7**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Mike Phillips Home, Right & V Phillips Home)



Map Scale: 1:11,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

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

473

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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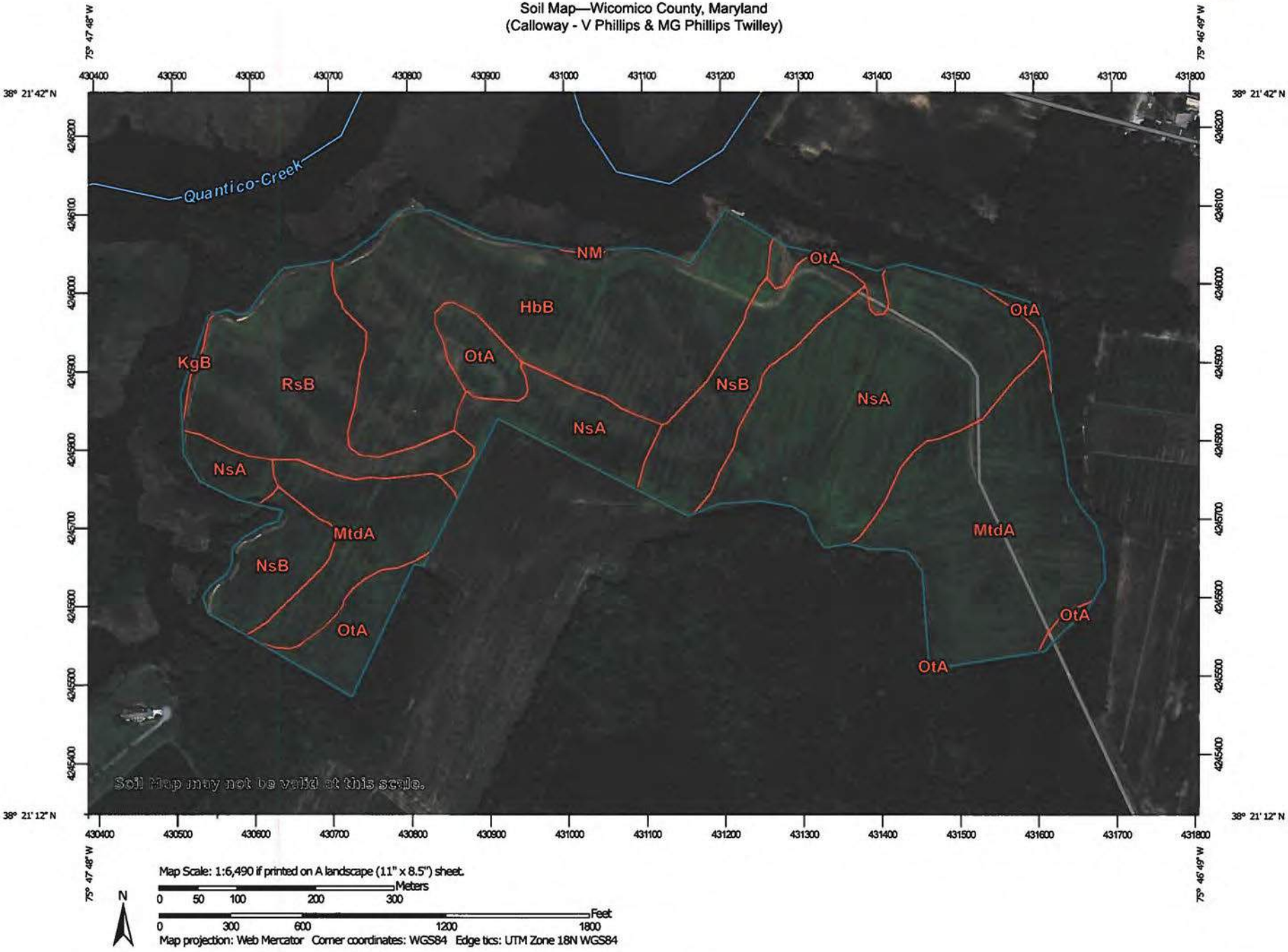
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EwC	Evesboro sand, 5 to 10 percent slopes	5.8	2.6%
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	5.3	2.4%
GaB	Galestown loamy sand, 2 to 5 percent slopes	9.2	4.1%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	14.8	6.6%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	17.3	7.8%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	3.2	1.4%
MtdA	Mattapex silt loam, 0 to 2 percent slopes, Northern Tidewater Area	19.0	8.5%
NsA	Nassawango silt loam, 0 to 2 percent slopes	34.8	15.6%
NsB	Nassawango silt loam, 2 to 5 percent slopes	8.4	3.8%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	59.5	26.6%
RwB	Runclint-Cedartown complex, 2 to 5 percent slopes	45.6	20.4%
W	Water	0.4	0.2%
Totals for Area of Interest		**223.3**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - V Phillips & MG Phillips Twilley)



Map Scale: 1:6,490 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

N

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

1.2%

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

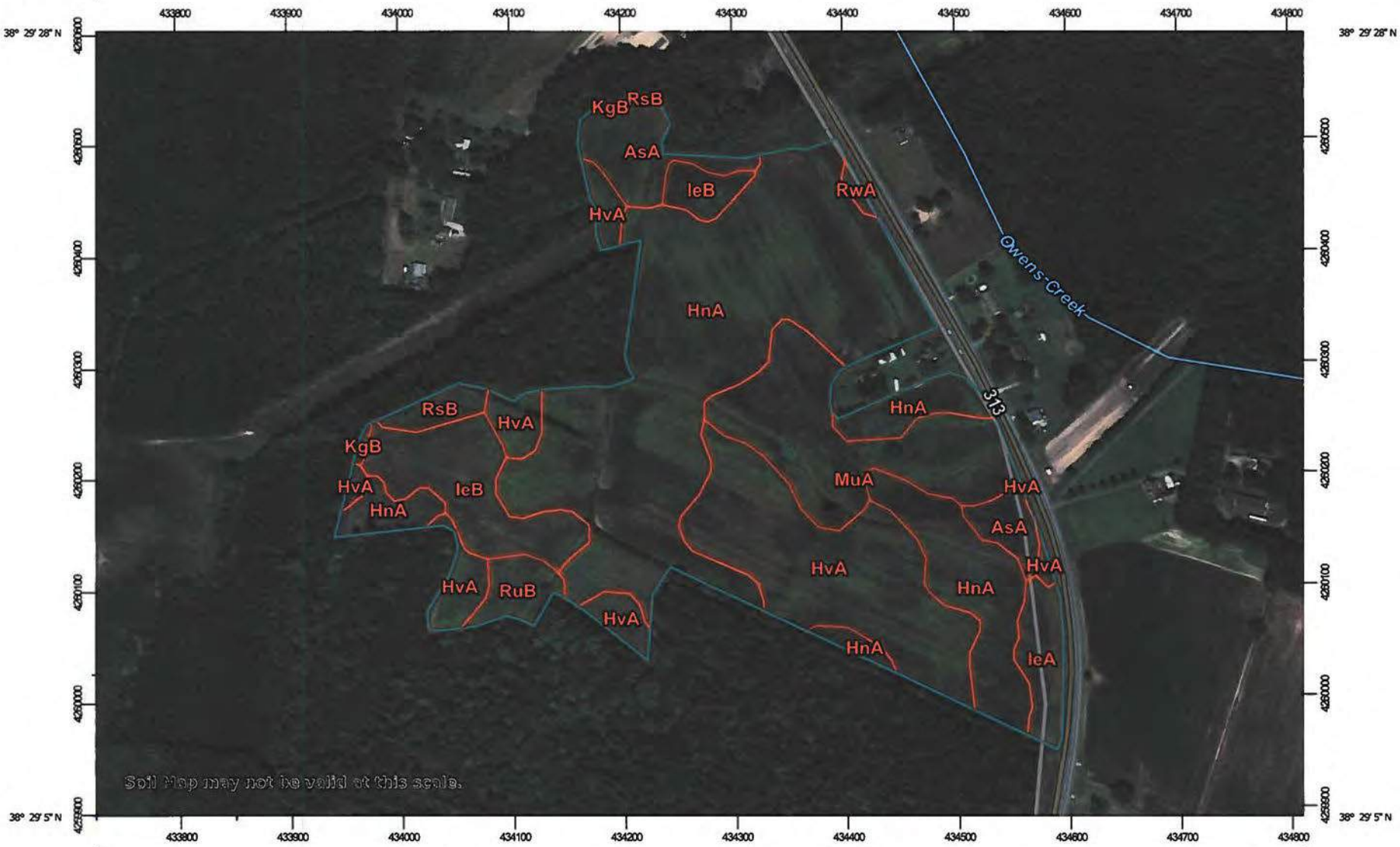
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

677

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HbB	Hambrook sandy loam, 2 to 5 percent slopes	25.3	23.9%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.2	0.2%
MtdA	Mattapex silt loam, 0 to 2 percent slopes, Northern Tidewater Area	24.1	22.7%
NM	Nanticoke and Mannington soils, very frequently flooded, tidal	0.1	0.0%
NsA	Nassawango silt loam, 0 to 2 percent slopes	26.3	24.8%
NsB	Nassawango silt loam, 2 to 5 percent slopes	11.1	10.4%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	6.8	6.4%
RsB	Runclint sand, 2 to 5 percent slopes	12.2	11.5%
Totals for Area of Interest		**106.0**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Shockley)



Map Scale: 1:4,970 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

679

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 19, 2017

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Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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680

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AsA	Askecksy loamy sand, 0 to 2 percent slopes	2.4	5.2%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	21.9	47.8%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	9.2	20.2%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	1.3	2.7%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	3.8	8.4%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.1	0.2%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	5.4	11.9%
RsB	Runclint sand, 2 to 5 percent slopes	0.6	1.4%
RuB	Runclint loamy sand, 2 to 5 percent slopes	0.9	1.9%
RwA	Runclint-Cedartown complex, 0 to 2 percent slopes	0.1	0.3%
Totals for Area of Interest		**45.8**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - W Truitt)

482

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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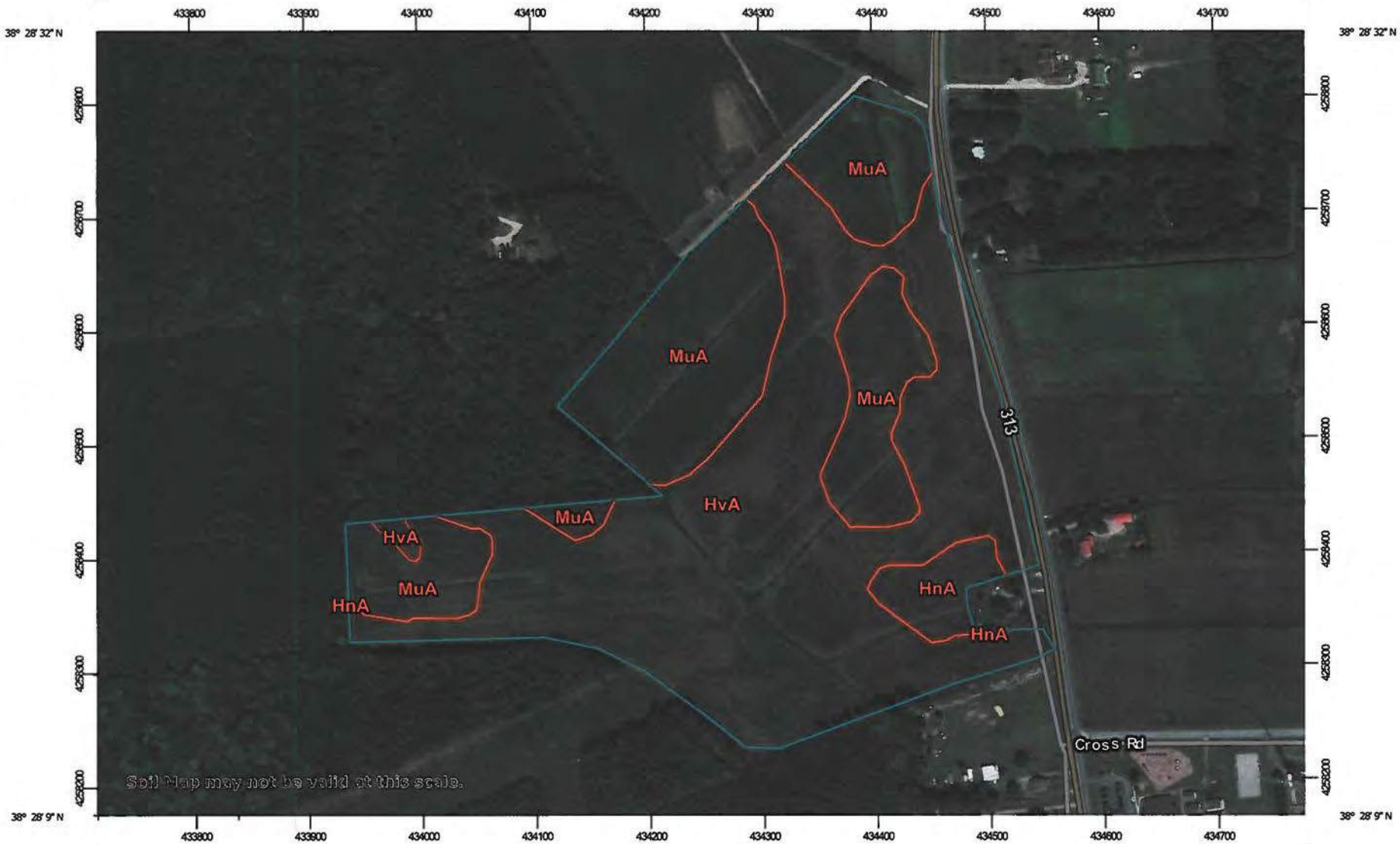
683

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	0.4	5.1%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.0	12.2%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	4.3	52.5%
RsA	Runclint sand, 0 to 2 percent slopes	0.0	0.3%
RsB	Runclint sand, 2 to 5 percent slopes	2.5	29.9%
Totals for Area of Interest		**8.3**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Henry Wang)



Map Scale: 1:4,860 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

N

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

685

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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680

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HnA	Hammonton sandy loam, 0 to 2 percent slopes	1.6	3.5%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	27.9	62.2%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	15.4	34.3%
Totals for Area of Interest		**44.9**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Donald Wilson)

Map Scale: 1:3,740 if printed on A landscape (11" x 8.5") sheet.

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

N

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

287

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 19, 2017

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Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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689

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LO	Longmarsh and Indiantown soils, frequently flooded	0.5	1.8%
MtdA	Mattapex silt loam, 0 to 2 percent slopes, Northern Tidewater Area	16.4	58.5%
NsB	Nassawango silt loam, 2 to 5 percent slopes	11.1	39.4%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Tidewater Area	0.1	0.3%
Totals for Area of Interest		**28.1**	**100.0%**

Soil Map—Wicomico County, Maryland
(Calloway - Stanford Wilson)

Map Scale: 1:1,530 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

N

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
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- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
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- Local Roads

Background
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MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Wicomico County, Maryland
Survey Area Data: Version 12, Sep 19, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 14, 2015—Mar 16, 2017

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L92

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GaB	Galestown loamy sand, 2 to 5 percent slopes	0.6	8.6%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	3.9	60.2%
HvA	Hurlock sandy loam, 0 to 2 percent slopes	0.6	8.8%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.7	10.5%
MuA	Mullica-Berryland complex, 0 to 2 percent slopes	0.7	10.4%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0.1	1.4%
Totals for Area of Interest		**6.4**	**100.0%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 42.06

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES POLY WATSON#473

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
473	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	13.8	33%
473	1	KfA	Keyport fine sandy loam, 0 to 2 percent slopes	6.1	14%
473	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	4.6	11%
473	1	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	7.9	19%
473	1	RsA	Runclint sand, 0 to 2 percent slopes	9.7	23%
			Total	**42.1**	**100%**
			Grand Total	**42.1**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES WALMART #1554

Prepared with assistance from USDA-Natural Resources Conservation Service

0 420 Feet

Soils

Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1554	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	2.2	15%
1554	1	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	3.0	20%
1554	1	RsA	Runclint sand, 0 to 2 percent slopes	6.1	41%
1554	1	RsB	Runclint sand, 2 to 5 percent slopes	3.4	23%
			Total	**14.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1554	2	EwB	Evesboro sand, 2 to 5 percent slopes	1.0	3%
1554	2	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	4.9	12%
1554	2	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	15.6	39%
1554	2	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	16.6	42%
1554	2	RsA	Runclint sand, 0 to 2 percent slopes	1.5	4%
			Total	**39.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1554	3	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	0.5	5%
1554	3	RsA	Runclint sand, 0 to 2 percent slopes	5.0	55%
1554	3	RsB	Runclint sand, 2 to 5 percent slopes	3.6	40%
			Total	**9.1**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1554	4	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	0.1	13%
1554	4	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	0.3	38%
1554	4	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	0.1	13%
1554	4	RsA	Runclint sand, 0 to 2 percent slopes	0.3	38%
			Total	**0.8**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1554	5	RsA	Runclint sand, 0 to 2 percent slopes	0.7	88%
1554	5	RsB	Runclint sand, 2 to 5 percent slopes	0.1	13%
			Total	**0.8**	**100%**

Grand Total	**65.0**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 6.02

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES MALONE AG#6498

Prepared with assistance from USDA-Natural Resources Conservation Service

0 200 Feet

Soils
Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6498	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	6.0	100%
6498	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	0.0	0%
			Total	**6.0**	**100%**
			Grand Total	**6.0**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 46.35

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES PUSEY, ELTON #930

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
930	1	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	39.9	86%
930	1	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	1.0	2%
930	1	RsB	Runclint sand, 2 to 5 percent slopes	4.7	10%
930	1	WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	0.6	1%
930	1	Zk	Zekiah silt loam, frequently flooded	0.1	0%
			Total	**46.3**	**100%**
			Grand Total	**46.3**	**100%**

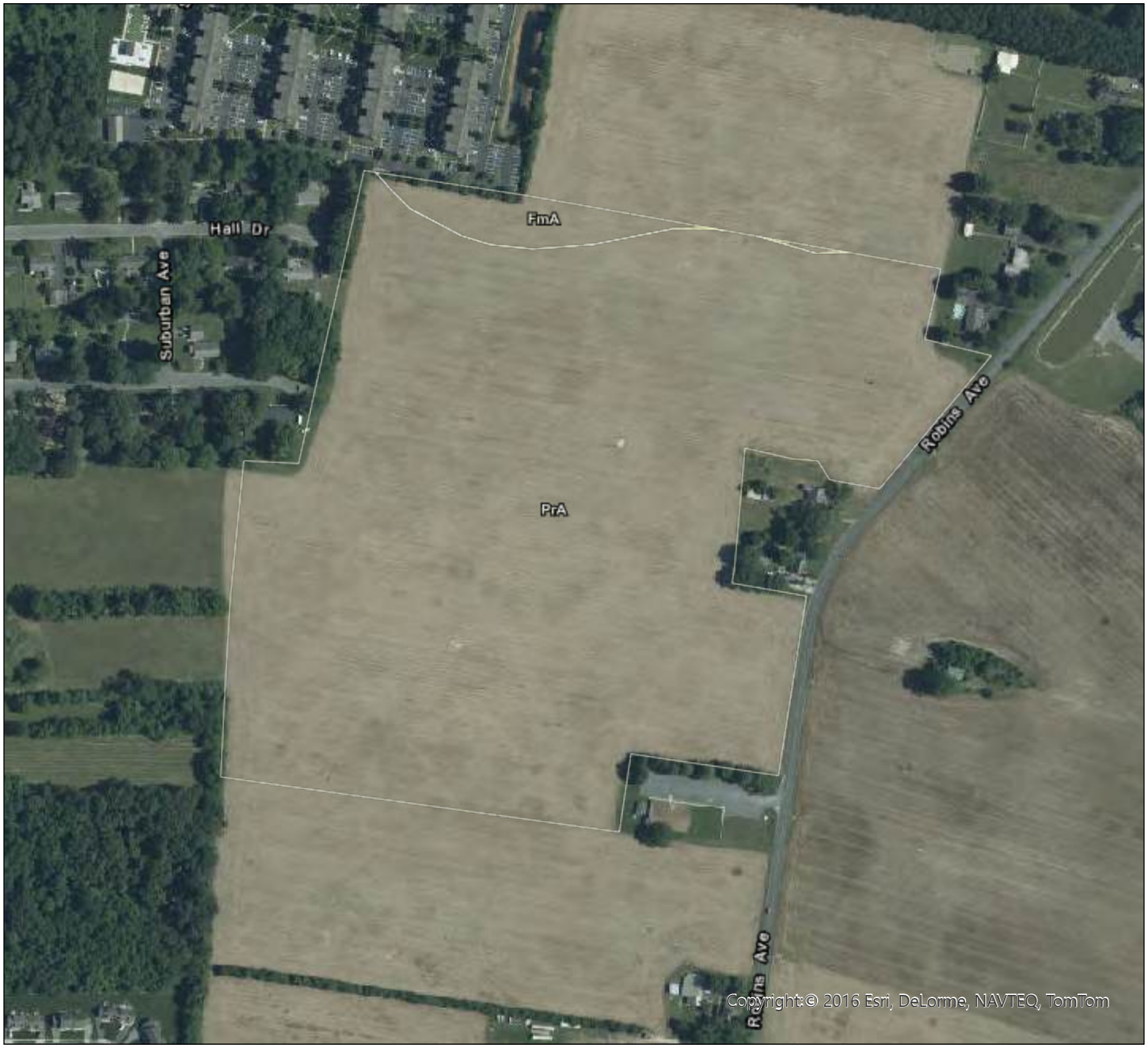
Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 38.12

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES TOM HALL #5094



Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
5094	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	1.3	3%
5094	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	36.8	97%
			Total	**38.1**	**100%**
			Grand Total	**38.1**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 14.82

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES MALONE AG#6312

Prepared with assistance from USDA-Natural Resources Conservation Service

0 400 Feet

Case PLUs
Draft
Soils
Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6312	1	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	0.0	0%
6312	1	KfB	Keyport fine sandy loam, 2 to 5 percent slopes	0.2	2%
6312	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	2.6	28%
6312	1	PrB	Pepperbox-Rockawalkin complex, 2 to 5 percent slopes	2.2	24%
6312	1	RuA	Runclint loamy sand, 0 to 2 percent slopes	4.2	46%
			Total	**9.2**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6312	2	KfA	Keyport fine sandy loam, 0 to 2 percent slopes	0.7	12%
6312	2	KfB	Keyport fine sandy loam, 2 to 5 percent slopes	0.1	2%
6312	2	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	2.8	49%
6312	2	PrB	Pepperbox-Rockawalkin complex, 2 to 5 percent slopes	2.1	37%
			Total	**5.7**	**100%**
			Grand Total	**14.9**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 36.70

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES PHILLIPS #810

Prepared with assistance from USDA-Natural Resources Conservation Service

0 420 Feet

Soils
Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
810	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	16.4	45%
810	1	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	4.7	13%
810	1	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	4.5	12%
810	1	RkB	Rockawalkin loamy sand, 2 to 5 percent slopes	0.4	1%
810	1	RoA	Rosedale loamy sand, 0 to 2 percent slopes	10.7	29%
810	1	Zk	Zekiah silt loam, frequently flooded	0.0	0%
			Total	**36.7**	**100%**
			Grand Total	**36.7**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 11.41

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES PACKING SHED RIGHT #1661

Prepared with assistance from USDA-Natural Resources Conservation Service

0 200 Feet

Soils
Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1661	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	11.4	100%
			Total	**11.4**	**100%**
			Grand Total	**11.4**	**100%**

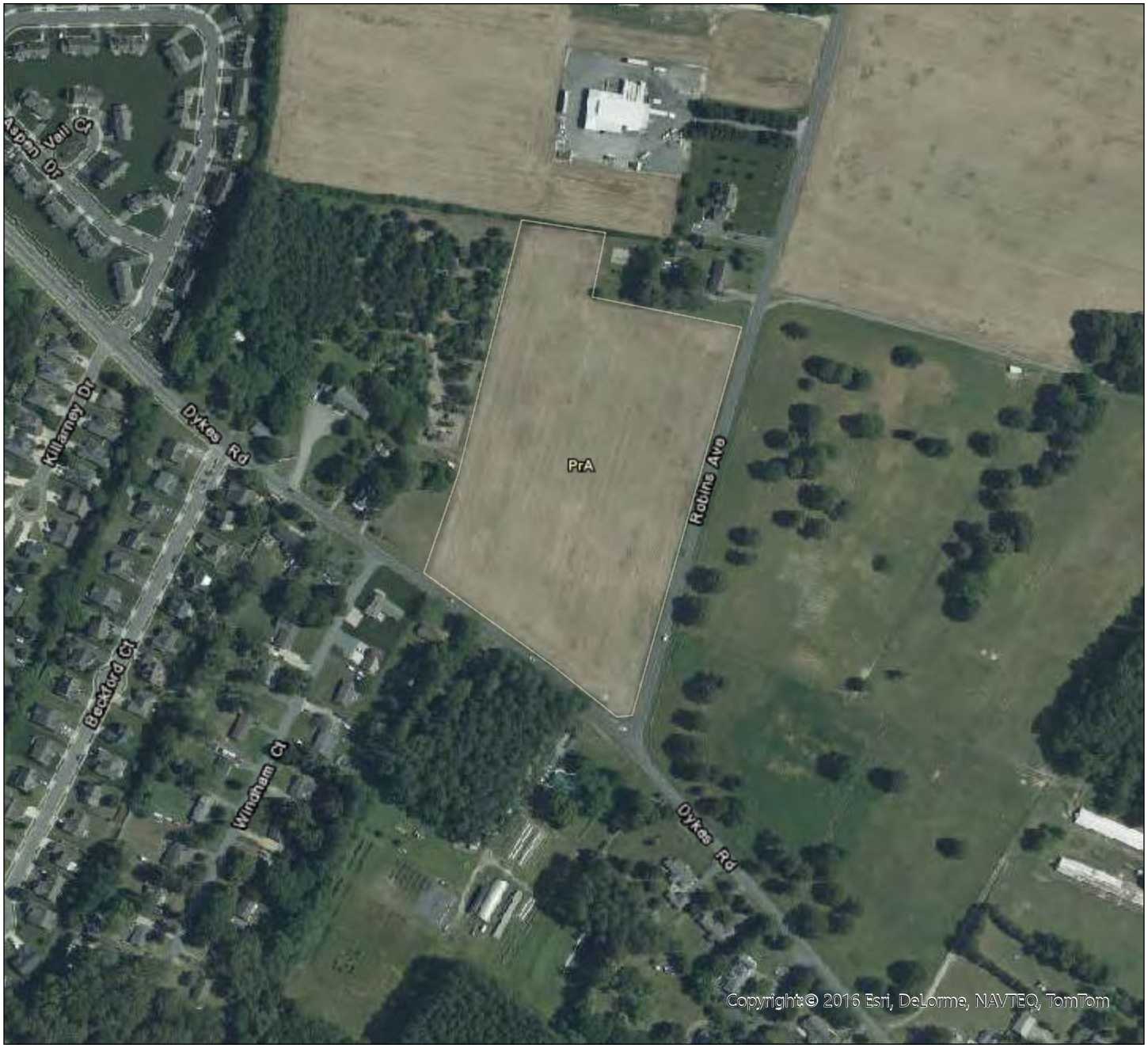
Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 10.38

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES PACKING SHED LEFT #1662



Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1662	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	10.4	100%
			Total	**10.4**	**100%**
			Grand Total	**10.4**	**100%**

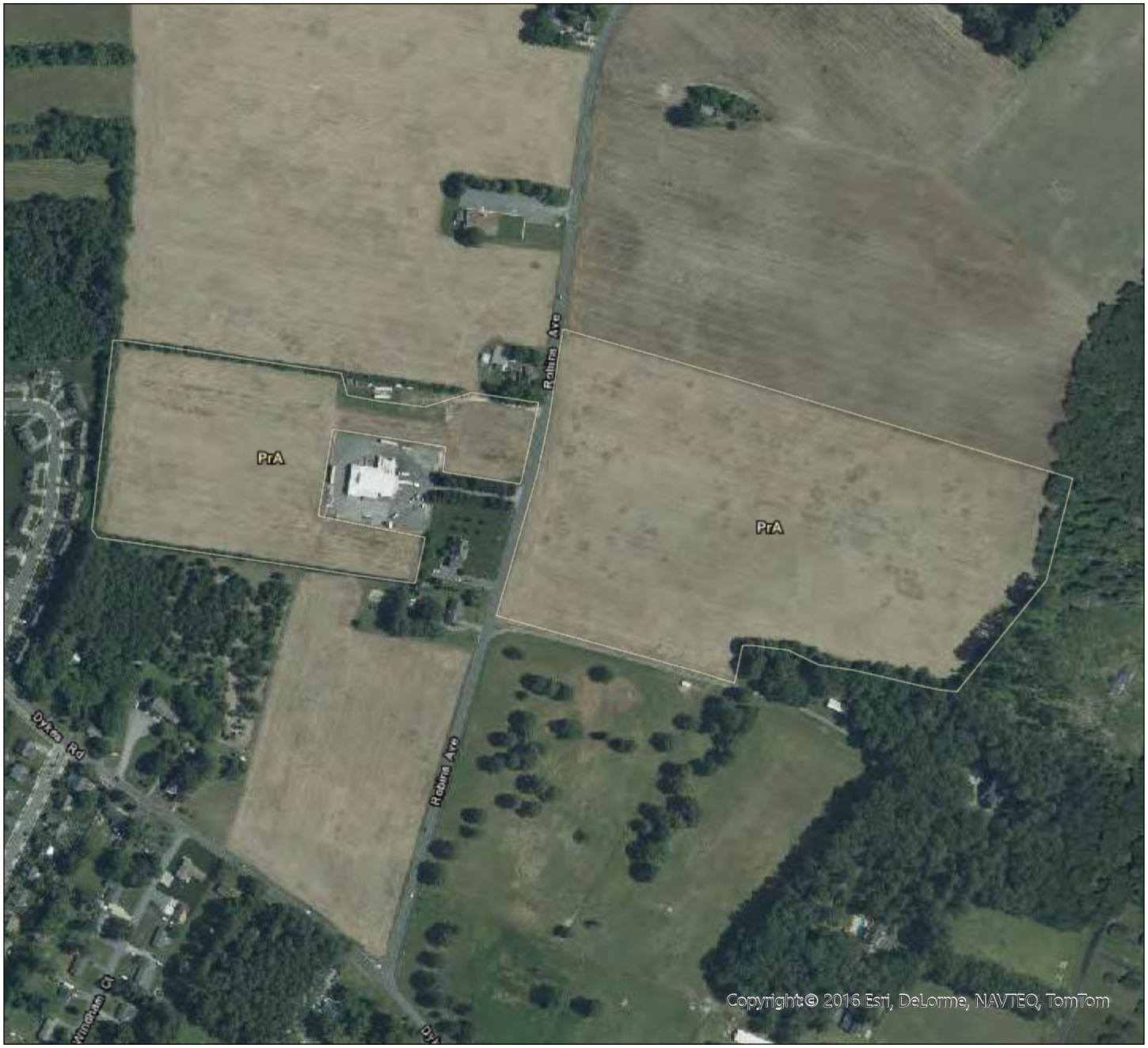
Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 36.76

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES PACKING SHED #485



Prepared with assistance from USDA-Natural Resources Conservation Service

0 420 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
485	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	11.4	100%
			Total	**11.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
485	2	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	25.4	100%
			Total	**25.4**	**100%**
			Grand Total	**36.8**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 42.13

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

H A L E S L U F F M A N #1695

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1695	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	2.1	7%
1695	1	RsA	Runclint sand, 0 to 2 percent slopes	29.2	93%
1695	1	Zk	Zekiah silt loam, frequently flooded	0.1	0%
			Total	**31.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1695	2	RsA	Runclint sand, 0 to 2 percent slopes	4.3	100%
1695	2	RsB	Runclint sand, 2 to 5 percent slopes	0.0	0%
			Total	**4.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1695	3	AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.0	0%
1695	3	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	2.2	34%
1695	3	RnB	Rockawalkin-Urban land complex, 2 to 5 percent slopes	0.1	2%
1695	3	RsA	Runclint sand, 0 to 2 percent slopes	4.1	64%
1695	3	Zk	Zekiah silt loam, frequently flooded	0.0	0%
			Total	**6.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1695	4	RsA	Runclint sand, 0 to 2 percent slopes	5.4	50%
1695	4	RsB	Runclint sand, 2 to 5 percent slopes	4.3	40%
1695	4	Zk	Zekiah silt loam, frequently flooded	1.0	9%
			Total	**10.7**	**100%**

Grand Total	**52.8**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 67.17

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES JENKINS WARWICK #1878

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	1	KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.8	12%
1878	1	LfA	Lenni sandy loam, 0 to 2 percent slopes	6.6	43%
1878	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	4.8	31%
1878	1	RsA	Runclint sand, 0 to 2 percent slopes	2.3	15%
			Total	**15.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	2	KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.1	26%
1878	2	LfA	Lenni sandy loam, 0 to 2 percent slopes	2.7	64%
1878	2	RsB	Runclint sand, 2 to 5 percent slopes	0.4	10%
			Total	**4.2**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	3	LfA	Lenni sandy loam, 0 to 2 percent slopes	5.0	16%
1878	3	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	26.4	84%
			Total	**31.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	4	LfA	Lenni sandy loam, 0 to 2 percent slopes	1.0	42%
1878	4	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	1.4	58%
			Total	**2.4**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	5	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.0	0%
1878	5	LfA	Lenni sandy loam, 0 to 2 percent slopes	0.5	4%
1878	5	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	12.0	88%
1878	5	PrB	Pepperbox-Rockawalkin complex, 2 to 5 percent slopes	1.2	9%
			Total	**13.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	7	LfA	Lenni sandy loam, 0 to 2 percent slopes	0.1	2%
1878	7	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	5.6	98%
			Total	**5.7**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	8	FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	0.4	16%
1878	8	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	1.1	44%
1878	8	PrB	Pepperbox-Rockawalkin complex, 2 to 5 percent slopes	1.0	40%
1878	8	RoA	Rosedale loamy sand, 0 to 2 percent slopes	0.0	0%
1878	8	RsA	Runclint sand, 0 to 2 percent slopes	0.0	0%
			Total	**2.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1878	9	RsA	Runclint sand, 0 to 2 percent slopes	0.2	100%
			Total	**0.2**	**100%**
			Grand Total	**75.6**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 34.04

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

HALES JENKINS TERRAPIN #1879

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1879	1	KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.8	40%
1879	1	LfA	Lenni sandy loam, 0 to 2 percent slopes	1.2	27%
1879	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	0.2	4%
1879	1	RsA	Runclint sand, 0 to 2 percent slopes	1.3	29%
			Total	**4.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1879	2	LfA	Lenni sandy loam, 0 to 2 percent slopes	0.4	3%
1879	2	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	6.4	46%
1879	2	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	3.2	23%
1879	2	RsA	Runclint sand, 0 to 2 percent slopes	3.8	28%
1879	2	RsB	Runclint sand, 2 to 5 percent slopes	0.0	0%
			Total	**13.8**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1879	3	FgdA	Fallsington loams, 0 to 2 percent slopes, Northern Tidewater Area	0.7	6%
1879	3	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.0	0%
1879	3	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0.6	5%
1879	3	RsA	Runclint sand, 0 to 2 percent slopes	10.3	89%
			Total	**11.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1879	4	KgB	Klej-Galloway complex, 0 to 5 percent slopes	0.0	0%
1879	4	LgA	Lenni loam, 0 to 2 percent slopes	0.7	17%
1879	4	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	2.1	51%
1879	4	RsA	Runclint sand, 0 to 2 percent slopes	1.3	32%
			Total	**4.1**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1879	5	RsA	Runclint sand, 0 to 2 percent slopes	0.2	100%
			Total	**0.2**	**100%**

Grand Total	**34.2**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 31.62

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

Hales Hotten #1797

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

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Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
1797	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	3.2	10%
1797	1	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	3.3	10%
1797	1	HbB	Hambrook sandy loam, 2 to 5 percent slopes	1.2	4%
1797	1	LfA	Lenni sandy loam, 0 to 2 percent slopes	0.4	1%
1797	1	PrA	Pepperbox-Rockawalkin complex, 0 to 2 percent slopes	12.9	41%
1797	1	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	1.1	3%
1797	1	RoA	Rosedale loamy sand, 0 to 2 percent slopes	9.0	28%
1797	1	RsB	Runclint sand, 2 to 5 percent slopes	0.5	2%
			Total	**31.6**	**100%**
			Grand Total	**31.6**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 22.17

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

Hales Glasgow #5797

Prepared with assistance from USDA-Natural Resources Conservation Service

0 330 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
5797	1	AsA	Askecksy loamy sand, 0 to 2 percent slopes	0.3	1%
5797	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	1.8	9%
5797	1	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	13.9	67%
5797	1	RoA	Rosedale loamy sand, 0 to 2 percent slopes	4.8	23%
			Total	**20.8**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
5797	2	RoA	Rosedale loamy sand, 0 to 2 percent slopes	1.4	100%
5797	2	RsB	Runclint sand, 2 to 5 percent slopes	0.0	0%
5797	2	Zk	Zekiah silt loam, frequently flooded	0.0	0%
			Total	**1.4**	**100%**

Grand Total	**22.2**	**100%**

Date: 5/29/2025

Soils Map and Report

Client(s): CALLOWAY BROTHERS
Wicomico County, Maryland
Approximate Acres: 122.73

Assisted By: Edward Silva
WICOMICO COUNTY SERVICE CENTER
WICOMICO SCD

Hales Collins #6119

Prepared with assistance from USDA-Natural Resources Conservation Service

0 550 Feet

Soils
Soil Mapunit

N

USDA is an equal opportunity provider, employer, and lender

Soils Inventory Report

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	3.3	67%
6119	1	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	1.5	31%
6119	1	RuA	Runclint loamy sand, 0 to 2 percent slopes	0.1	2%
			Total	**4.9**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	2	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	5.3	48%
6119	2	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	5.3	48%
6119	2	RuA	Runclint loamy sand, 0 to 2 percent slopes	0.4	4%
			Total	**11.0**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	3	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	3.9	46%
6119	3	RoA	Rosedale loamy sand, 0 to 2 percent slopes	4.2	49%
6119	3	RuB	Runclint loamy sand, 2 to 5 percent slopes	0.4	5%
			Total	**8.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	4	KgB	Klej-Galloway complex, 0 to 5 percent slopes	2.6	3%
6119	4	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	16.6	21%
6119	4	RoA	Rosedale loamy sand, 0 to 2 percent slopes	43.8	55%
6119	4	RuA	Runclint loamy sand, 0 to 2 percent slopes	4.2	5%
6119	4	RuB	Runclint loamy sand, 2 to 5 percent slopes	12.3	15%
			Total	**79.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	5	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	0.6	3%
6119	5	KgB	Klej-Galloway complex, 0 to 5 percent slopes	1.2	6%
6119	5	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0.3	2%
6119	5	RoA	Rosedale loamy sand, 0 to 2 percent slopes	6.9	37%
6119	5	RuA	Runclint loamy sand, 0 to 2 percent slopes	3.8	20%
6119	5	RuB	Runclint loamy sand, 2 to 5 percent slopes	5.8	31%
			Total	**18.6**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	Forest	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	6.4	61%
6119	Forest	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	2.3	22%
6119	Forest	RuB	Runclint loamy sand, 2 to 5 percent slopes	1.8	17%
			Total	**10.5**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	HQ1	FmA	Fort Mott loamy sand, 0 to 2 percent slopes	0.4	5%
6119	HQ1	FmB	Fort Mott loamy sand, 2 to 5 percent slopes	0.3	4%
6119	HQ1	RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	1.1	15%
6119	HQ1	RoA	Rosedale loamy sand, 0 to 2 percent slopes	1.3	18%
6119	HQ1	RuA	Runclint loamy sand, 0 to 2 percent slopes	3.9	53%
6119	HQ1	RuB	Runclint loamy sand, 2 to 5 percent slopes	0.3	4%
			Total	**7.3**	**100%**

Tract	Land Unit	Map Unit Symbol	Map Unit Name	Acres	Percent
6119	HQ2	RoA	Rosedale loamy sand, 0 to 2 percent slopes	0.8	100%
			Total	**0.8**	**100%**

Grand Total	**141.1**	**100%**

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

[Minor map unit components are excluded from this report]

Map unit: AsA - Askecksy loamy sand, 0 to 2 percent slopes

Component: Askecksy, undrained (45%)

The Askecksy, undrained 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 sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is low. 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 4w. This soil meets hydric criteria.

Component: Askecksy, drained (30%)

The Askecksy, drained 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 sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is very low. 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 1 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Map unit: AtA - Askecksy-Urban land complex, 0 to 2 percent slopes

Component: Askecksy, drained (45%)

The Askecksy, 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 sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is very low. 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 1 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Component: Urban Land (35%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map unit: Be - Beaches

Component: Beaches (80%)

Generated brief soil descriptions are created for major soil components. The Beaches is a miscellaneous area.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: BhA - Berryland mucky loamy sand, 0 to 2 percent slopes

Component: Berryland, drained (50%)

The Berryland, drained component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is low. 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 11 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil meets hydric criteria.

Component: Berryland, undrained (30%)

The Berryland, undrained component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is low. 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 4w. This soil meets hydric criteria.

Map unit: CdA - Cedartown loamy sand, 0 to 2 percent slopes

Component: Cedartown (75%)

The Cedartown component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 2s. This soil does not meet 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.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

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

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: EQB - Endoaquepts and Sulfaquepts, 0 to 5 percent slopes

Component: Endoaquepts, drained (50%)

The Endoaquepts, drained component makes up 50 percent of the map unit. Slopes are 0 to 5 percent. This component is on on tidal marsh spoil piles, coastal plains, tidal marshes. The parent material consists of dredged material from silty and clayey estuarine 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 is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is rarely ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 5s. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Sulfaquepts, drained (40%)

The Sulfaquepts, drained component makes up 40 percent of the map unit. Slopes are 0 to 5 percent. This component is on tidal marshes, coastal plains, on tidal marsh spoil piles. The parent material consists of dredged material from silty and clayey estuarine deposits. Depth to a root restrictive layer, sulfuric, is 0 to 24 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 moderate. Shrink-swell potential is low. This soil is not flooded. It is rarely ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 5s. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Map unit: EwA - Evesboro sand, 0 to 2 percent slopes

Component: Evesboro (75%)

The Evesboro component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively 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 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: EwB - Evesboro sand, 2 to 5 percent slopes

Component: Evesboro (75%)

The Evesboro 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 sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively 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 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map unit: EwC - Evesboro sand, 5 to 10 percent slopes

Component: Evesboro (75%)

The Evesboro component makes up 75 percent of the map unit. Slopes are 5 to 10 percent. This component is on uplands, knolls. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively 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 0 percent. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

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

Component: Fallsington, drained (40%)

The Fallsington, drained component makes up 40 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. 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: Fallsington, undrained (40%)

The Fallsington, undrained component makes up 40 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. 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 Description (Brief, Generated)

Wicomico County, Maryland

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

Map unit: FmA - Fort Mott loamy sand, 0 to 2 percent slopes

Component: Fort Mott (80%)

The Fort Mott 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 Sandy eolian deposits over fluviomarine sediments fluviomarine deposits. 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 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 2s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Map unit: FmB - Fort Mott loamy sand, 2 to 5 percent slopes

Component: Fort Mott (80%)

The Fort Mott 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 Sandy eolian deposits over fluviomarine sediments fluviomarine deposits. 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 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 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: FuA - Fort Mott-Urban land complex, 0 to 2 percent slopes

Component: Fort Mott (45%)

The Fort Mott 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 sandy 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 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 2s. This soil does not meet hydric criteria.

Component: Urban Land (30%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map unit: FuB - Fort Mott-Urban land complex, 2 to 5 percent slopes

Component: Fort Mott (45%)

The Fort Mott component makes up 45 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of sandy 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 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 2s. This soil does not meet hydric criteria.

Component: Urban Land (30%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map unit: GaA - Galestown loamy sand, 0 to 2 percent slopes

Component: Galestown (80%)

The Galestown 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 sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively 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 0 percent. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: GaB - Galestown loamy sand, 2 to 5 percent slopes

Component: Galestown (80%)

The Galestown 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 sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively 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 0 percent. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Map unit: HbA - Hambrook sandy loam, 0 to 2 percent slopes

Component: Hambrook (80%)

The Hambrook 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 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. 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: HbB - Hambrook sandy loam, 2 to 5 percent slopes

Component: Hambrook (80%)

The Hambrook 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 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. 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.

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.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: Ho - Honga peat, very frequently flooded, tidal

Component: Honga (80%)

The Honga component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on coastal plains, submerged upland tidal marshes. The parent material consists of herbaceous organic material over 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 very high. Shrink-swell potential is low. This soil is very frequently flooded. It is not 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 50 percent. Nonirrigated land capability classification is 8. This soil meets hydric criteria. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

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: IeA - Ingleside loamy sand, 0 to 2 percent slopes

Component: Ingleside (75%)

The Ingleside component makes up 75 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 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 1. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: IeB - Ingleside loamy sand, 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: KfA - Keyport fine sandy loam, 0 to 2 percent slopes

Component: Keyport (85%)

The Keyport component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of silty and clayey 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 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: KfB - Keyport fine sandy loam, 2 to 5 percent slopes

Component: Keyport (85%)

The Keyport component makes up 85 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of silty and clayey 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 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: KgB - Klej-Galloway complex, 0 to 5 percent slopes

Component: Klej (45%)

The Klej component makes up 45 percent of the map unit. Slopes are 0 to 5 percent. This component is on uplands, flats. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly 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 12 inches during February. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: KgB - Klej-Galloway complex, 0 to 5 percent slopes

Component: Galloway (35%)

The Galloway component makes up 35 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: LfA - Lenni sandy loam, 0 to 2 percent slopes

Component: Lenni, undrained (50%)

The Lenni, undrained component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of clayey 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 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 94 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Component: Lenni, drained (35%)

The Lenni, drained 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 clayey 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 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 6 percent. Nonirrigated land capability classification is 3w. Irrigated land capability classification is 3w. This soil meets hydric criteria.

Map unit: LgA - Lenni loam, 0 to 2 percent slopes

Component: Lenni, undrained (50%)

The Lenni, undrained component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of clayey 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 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 94 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: LgA - Lenni loam, 0 to 2 percent slopes

Component: Lenni, drained (35%)

The Lenni, drained 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 clayey 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 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 6 percent. Nonirrigated land capability classification is 3w. Irrigated 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 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.

Map unit: M-W - Miscellaneous water

Component: Miscellaneous water (100%)

Generated brief soil descriptions are created for major soil components. The Miscellaneous water is a miscellaneous area.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: Ma - Manahawkin muck, frequently flooded

Component: Manahawkin (85%)

The Manahawkin component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on coastal plains, swamps. The parent material consists of organic, woody material over sandy 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 very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 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 7w. This soil meets hydric criteria.

Map unit: MpA - Mattapex fine sandy loam, 0 to 2 percent slopes

Component: Mattapex (80%)

The Mattapex 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 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.

Map unit: MtA - Mattapex silt loam, 0 to 2 percent slopes

Component: Mattapex (80%)

The Mattapex 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 silty 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 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.

Map unit: MtB - Mattapex silt loam, 2 to 5 percent slopes

Component: Mattapex (80%)

The Mattapex component makes up 80 percent of the map unit. Slopes are 2 to 5 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 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.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: MuA - Mullica-Berryland complex, 0 to 2 percent slopes

Component: Berryland, drained (25%)

The Berryland, 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 sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is low. 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 11 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil meets hydric criteria.

Component: Mullica, drained (25%)

The Mullica, drained component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy and loamy 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 high. Available water to a depth of 60 inches is low. 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 16 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil meets hydric criteria.

Component: Berryland, undrained (15%)

The Berryland, undrained component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or 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 high. Available water to a depth of 60 inches is low. 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 4w. This soil meets hydric criteria.

Component: Mullica, undrained (15%)

The Mullica, undrained component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy and loamy 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 high. Available water to a depth of 60 inches is moderate. 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 66 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: NM - Nanticoke and Mannington soils, very frequently flooded, tidal

Component: Nanticoke (50%)

The Nanticoke component makes up 50 percent of the map unit. Slopes are 0 to 1 percent. This component is on estuarine tidal flats, coastal plains. The parent material consists of silty estuarine 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 very frequently flooded. It is not ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 8. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Mannington (40%)

The Mannington component makes up 40 percent of the map unit. Slopes are 0 to 1 percent. This component is on estuarine tidal flats, coastal plains. The parent material consists of silty estuarine sediments over organic, herbacious materials. 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 very frequently flooded. It is not ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 15 percent. Nonirrigated land capability classification is 8. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Map unit: NnA - Nassawango fine sandy 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 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 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 1. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Component: Matapeake (5%)

The Matapeake 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 silty 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 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 2 percent. Nonirrigated land capability classification is 1. Irrigated land capability classification is 1 This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: NnB - Nassawango fine sandy loam, 2 to 5 percent slopes

Component: Nassawango (80%)

The Nassawango 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 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: 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.

Map unit: NsB - Nassawango silt loam, 2 to 5 percent slopes

Component: Nassawango (80%)

The Nassawango 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. 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: OKA - Othello and Kentuck soils, 0 to 2 percent slopes

Component: Kentuck, undrained (40%)

The Kentuck, undrained component makes up 40 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.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: OKA - Othello and Kentuck soils, 0 to 2 percent slopes

Component: Othello, undrained (40%)

The Othello, undrained component makes up 40 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 and/or 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 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.

Map unit: OtA - Othello silt loam, 0 to 2 percent slopes

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, lowlands. 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 poorly 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 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: Othello, undrained (27%)

The Othello, undrained component makes up 27 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 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 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: Pk - Puckum muck, frequently flooded

Component: Puckum (85%)

The Puckum component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on coastal plains, swamps. The parent material consists of woody organic material. 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 high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: PrA - Pepperbox-Rockawalkin complex, 0 to 2 percent slopes

Component: Pepperbox (50%)

The Pepperbox component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy 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 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: Rockawalkin (30%)

The Rockawalkin component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy 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 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 1 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Map unit: PrB - Pepperbox-Rockawalkin complex, 2 to 5 percent slopes

Component: Pepperbox (50%)

The Pepperbox component makes up 50 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of sandy 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 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: Rockawalkin (30%)

The Rockawalkin component makes up 30 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of sandy 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 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 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: RkA - Rockawalkin loamy sand, 0 to 2 percent slopes

Component: Rockawalkin (75%)

The Rockawalkin component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy 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 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 1 percent. Nonirrigated land capability classification is 2w. Irrigated land capability classification is 2w. This soil does not meet hydric criteria.

Map unit: RkB - Rockawalkin loamy sand, 2 to 5 percent slopes

Component: Rockawalkin (75%)

The Rockawalkin 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 sandy 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 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 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: RnA - Rockawalkin-Urban land complex, 0 to 2 percent slopes

Component: Rockawalkin (55%)

The Rockawalkin component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy 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 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 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Urban Land (35%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: RnB - Rockawalkin-Urban land complex, 2 to 5 percent slopes

Component: Rockawalkin (55%)

The Rockawalkin component makes up 55 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of sandy 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 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 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Urban Land (35%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map unit: RoA - Rosedale loamy sand, 0 to 2 percent slopes

Component: Rosedale (75%)

The Rosedale component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy 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 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Map unit: RsA - Runclint sand, 0 to 2 percent slopes

Component: Runclint (75%)

The Runclint component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: RsB - Runclint sand, 2 to 5 percent slopes

Component: Runclint (75%)

The Runclint component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, knolls. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map unit: RuA - Runclint loamy sand, 0 to 2 percent slopes

Component: Runclint (75%)

The Runclint component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map unit: RuB - Runclint loamy sand, 2 to 5 percent slopes

Component: Runclint (75%)

The Runclint component makes up 75 percent of the map unit. Slopes are 2 to 5 percent. This component is on knolls, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map unit: RwA - Runclint-Cedartown complex, 0 to 2 percent slopes

Component: Runclint (45%)

The Runclint component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on uplands, flats. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: RwA - Runclint-Cedartown complex, 0 to 2 percent slopes

Component: Cedartown (40%)

The Cedartown 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 sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Map unit: RwB - Runclint-Cedartown complex, 2 to 5 percent slopes

Component: Runclint (45%)

The Runclint component makes up 45 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, dunes. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Component: Cedartown (40%)

The Cedartown component makes up 40 percent of the map unit. Slopes are 2 to 5 percent. This component is on dunes, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 2s. This soil does not meet hydric criteria.

Map unit: RzA - Runclint-Urban land complex, 0 to 2 percent slopes

Component: Runclint (55%)

The Runclint component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, uplands. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Component: Urban Land (35%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: RzB - Runclint-Urban land complex, 2 to 5 percent slopes

Component: Runclint (55%)

The Runclint component makes up 55 percent of the map unit. Slopes are 2 to 5 percent. This component is on uplands, flats. The parent material consists of sandy eolian deposits and/or fluviomarine sediments. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is moderately 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 45 inches during January. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. Irrigated land capability classification is 3s. This soil does not meet hydric criteria.

Component: Urban Land (35%)

Generated brief soil descriptions are created for major soil components. The Urban Land is a miscellaneous area.

Map unit: SuA - Sunken mucky silt loam, 0 to 2 percent slopes, occasionally flooded, tidal

Component: Sunken (80%)

The Sunken component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, lowlands, submerged upland tidal marshes. 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 occasionally flooded. It is occasionally 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 66 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

Map unit: TP - Transquaking and Mispillion soils, very frequently flooded, tidal

Component: Mispillion (40%)

The Mispillion component makes up 40 percent of the map unit. Slopes are 0 to 1 percent. This component is on estuarine tidal marshes, coastal plains. The parent material consists of herbaceous organic material over silty estuarine 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 very frequently flooded. It is not ponded. A seasonal zone of water saturation is at 2 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 77 percent. Nonirrigated land capability classification is 8. This soil meets hydric criteria. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: TP - Transquaking and Mispillion soils, very frequently flooded, tidal

Component: Transquaking (40%)

The Transquaking component makes up 40 percent of the map unit. Slopes are 0 to 1 percent. This component is on estuarine tidal marshes, coastal plains. The parent material consists of herbaceous organic material over estuarine 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 high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is very frequently flooded. It is not ponded. A seasonal zone of water saturation is at 2 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 8. This soil meets hydric criteria. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

Map unit: UbB - Udorthents, borrow area, 0 to 5 percent slopes

Component: Udorthents, borrow area (75%)

The Udorthents, borrow area component makes up 75 percent of the map unit. Slopes are 0 to 5 percent. This component is on uplands, flats, borrow pits. The parent material consists of 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. This soil does not meet hydric criteria.

Map unit: UfB - Udorthents, refuse substratum, 0 to 5 percent slopes

Component: Udorthents, refuse substratum (85%)

The Udorthents, refuse substratum component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on sanitary landfills, uplands. The parent material consists of refuse/rubble material over mine spoil or earthy fill. Depth to a root restrictive layer, strongly contrasting textural stratification, is 26 to 31 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 low. 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 3s. This soil does not meet hydric

Map unit: UoB - Udorthents, loamy, 0 to 5 percent slopes

Component: Udorthents, loamy (90%)

The Udorthents, loamy component makes up 90 percent of the map unit. Slopes are 0 to 5 percent. This component is on uplands, flats. The parent material consists of fluviomarine deposits. 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. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Wicomico County, Maryland

Map unit: WdA - Woodstown sandy loam, 0 to 2 percent slopes

Component: Woodstown (85%)

The Woodstown component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on shallow depressions, uplands, flats. The parent material consists of loamy fluviomarine sediments loamy. 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 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.

Map unit: Zk - Zekiah silt loam, frequently flooded

Component: Zekiah (80%)

The Zekiah component makes up 80 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 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 4 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

NRCS

[redacted]

File: managements\CMZ 59\c.Other Local Mgt Records\ACS\CgSp LitterSoyWccVegNT

Date	Operation	Vegetation	Yield (# harv. units)	Type of cover material	Cover matl add/remove, lb/ac	Cover from addition, %
4/22/0	Manure spreader, solid and semi-solid			Manure, poultry	1000	6.9
5/5/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	110			
10/1/0	Harvest, killing crop 50pct standing stubble				3100	70
5/15/2	Drill or air seeder single disk openers 7-10 in spac.	Soybean, mw 7in rows	30			
10/14/2	Harvest, killing crop 50pct standing stubble				490	25
10/15/2	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	60			
3/15/3	Manure spreader, solid and semi-solid			Manure, poultry	1000	6.9
7/18/3	Harvest, killing crop 50pct standing stubble				2900	82
7/23/3	Bale straw or residue					
9/22/3	Drill or air seeder single disk openers 7-10 in spac.	Rye, winter cover S.E.	3000			
3/25/4	Harvest, silage				150	8.4
4/15/4	Chisel, twisted shovel					
4/25/4	Disk, tandem heavy primary op.					
4/30/4	Bedder, hipper, disk hiller					
4/30/4	Bed shaper					
5/1/4	Plastic mulch applicator 75 percent cover					
5/1/4	Planter, transplanter, vegetable	Muskmelon	8000			

7/1/4		Harvest, killing crop 50pct standing stubble				900	41
7/1/4		Plastic mulch, remove					
7/1/4	Harvest, cabbage and head lettuce						

Long-term natural rough.: 6.0 mm
Normally used as a rotation?: Yes
Duration: 5 yr

Info:

File: managements\CMZ 59\c.Other Local Mgt Records\ACS\CgSp LitterCCSoyWNTVegPlas

Date	Operation	Vegetation	Yield (# harv. units)	Type of cover material	Cover matl add/remove, lb/ac	Cover from addition, %
4/22/0	Manure spreader, solid and semi-solid			Manure, poultry	1000	6.9
5/5/0	Drill or airseeder, double disk, w/ fluted coulters	Corn, grain	130			
10/1/0	Harvest, killing crop 50pct standing stubble				3600	74
10/2/0	Planting, broadcast seeder	Rye, winter cover S.E.	4000			
5/5/2	Sprayer, kill crop				600	30
5/15/2	Drill or air seeder single disk openers 7-10 in spac.	Soybean, mw 7in rows	35			
10/14/2	Harvest, killing crop 50pct standing stubble				550	28
10/15/2	Drill or air seeder single disk openers 7-10 in spac.	Wheat, winter 7in rows	60			
3/15/3	Manure spreader, solid and semi-solid			Manure, poultry	1000	6.9
7/18/3	Harvest, killing crop 50pct standing stubble				2900	82
7/23/3	Bale straw or residue					
9/22/3	Drill or air seeder single disk openers 7-10 in spac.	Rye, winter cover S.E.	4000			
4/1/4	Sprayer, kill crop				600	30
4/30/4	Bedder, hipper, disk hiller					
4/30/4	Bed shaper					
5/1/4	Plastic mulch applicator 75 percent cover					
5/1/4	Planter, transplanter, vegetable	Muskmelon	8000			
7/1/4	Harvest, killing crop 50pct standing stubble				900	41
8/1/4	Plastic mulch, remove					

Long-term natural rough.: 6.0 mm
Normally used as a rotation?: Yes
Duration: 5 yr Info: -

USDA NRCS Natural Resources Conservation Service

RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
5182 - 2-5,7-9	ADK 1	CgSp LitterSoyWccVegNT	HvA	300	1.0	5	2.4	0.01	0
1030 - 1,2,4,5	ASH 1	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.06	0
1146 - 1,2	AUS 1	CgSp LitterCCSoyWNTVegPlas	MtA	150	1.0	5	1.7	0.37	13
306 - 1-5	BEZ 1	CgSp LitterSoyWccVegNT	FaA	300	1.0	5	2.9	-0.03	0
1113 - 1-3	BLU 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
217 - 1,2	BRO 1	CgSp LitterSoyWccVegNT	IeA	300	1.0	5	1.9	0.06	0
217 - 1,2	BRO 2	CgSp LitterSoyWccVegNT	IeB	300	1.0	5	1.9	0.06	0
1022 - 1	CAL 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1022 - 2	CAL 2	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
1098 - 1-11	CAT 1	CgSp LitterSoyWccVegNT	HvA	300	1.0	5	2.4	0.01	0
1151 - 5	CHU 1	Cg2SpLitterSoyWccNTVegPlasCC	OtA	150	1.0	5	1.4	0.37	13
1151 - 3,4	CHU 2	Cg2SpLitterSoyWccNTVegPlasCC	OtA	150	1.0	5	1.4	0.37	13
1151 - 1,2	CHU 3	Cg2SpLitterSoyWccNTVegPlasCC	OtA	150	1.0	5	1.4	0.37	13
1128 - 1-3	CLA 1	CgSp LitterSoyWccVegNT	AsA	300	1.0	5	0.2	0.18	0
148 - 1	CUL 1	CgSp LitterSoyWccVegNT	PrA	300	1.0	4	1.2	0.10	0

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RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
148 - 2	CUL 2	CgSp LitterSoyWccVegNT	PrA	300	1.0	4	1.2	0.10	0
148 - 2	CUL 3	CgSp LitterSoyWccVegNT	RkA	300	1.0	5	1.9	0.05	0
148 - 1	CUL 4	CgSp LitterSoyWccVegNT	PrA	300	1.0	4	1.2	0.10	0
149 - 1,2	CUL 5	Cg2SpLitterSoyWccNTVegPlasCC	LgA	120	1.0	3	1.1	0.37	13
1106 - 1	DON 1	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0
5601 - 1,2	DON 2	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0
5460 - 3	DRE 1	CgSp LitterSoyWccVegNT	RsB	300	1.0	5	1.3	0.10	0
5460 - 4	DRE 2	CgSp LitterSoyWccVegNT	GaA	300	1.0	5	1.3	0.10	0
5460 - 5,7	DRE 3	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
5460 - 6,8	DRE 4	CgSp LitterSoyWccVegNT	RsB	300	1.0	5	1.3	0.10	0
394 - 1-3	EIC 1	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.08	0
1111 - 1,2,8	ELL 1	CgSp LitterSoyWccVegNT	FaA	300	1.0	5	2.9	-0.03	0
1111 - 3-6,9-12	ELL 2	CgSp LitterSoyWccVegNT	FgA	300	1.0	5	4.5	-0.15	0
1114 - 1,2,6	EVA 1	CgSp LitterSoyWccVegNT	PrA	300	1.0	4	1.2	0.10	0
1114 - 2,6	EVA 2	CgSp LitterSoyWccVegNT	PrA	300	1.0	4	1.2	0.10	0

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RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
1114 - 3	EVA 3	Cg2SpLitterSoyWccNTVegPlasCC	KfA	150	1.0	3	1.4	0.37	13
1114 - 4	EVA 4	CgSp LitterSoyWccVegNT	PrA	300	1.0	4	1.2	0.10	0
388 - 1	EVE 1	Cg2SpLitterSoyWccNTVegPlasCC	KfA	120	1.0	3	1.4	0.37	13
1200 - 4	FIS 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1200 - 1-3,5	FIS 2	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
1103 - 1,2	GRE 1	CgSp LitterSoyWccVegNT	RsB	300	1.0	5	1.3	0.10	0
8573 - 5-8	HAD 1	CgSp LitterSoyWccVegNT	FgA	300	1.0	5	4.6	-0.15	0
8573 - 3,4	HAD 2	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
5557 - 1,2,4,6-10	HAN 1	Cg2SpLitterSoyWccNTVegPlasCC	NsB	150	1.0	5	2.0	0.32	13
1118 - 1,2	HAT 1	CgSp LitterSoyWccVegNT	RwB	200	1.0	5	1.2	0.10	0
5757 - 1	HOC 1	Cg2SpLitterSoyWccNTVegPlasCC	HbB	100	2.0	5	1.7	0.34	13
395 - 1	HOM 1	CgSp LitterSoyWccVegNT	HnA	100	1.0	5	2.2	0.03	0
395 - 2	HOM 2	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.06	0
-	HOM 3	CgSp LitterSoyWccVegNT	KgB	150	1.0	5	1.2	0.11	0
-	HOM 4	CgSp LitterSoyWccVegNT	HvA	200	1.0	5	2.3	0.01	0

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RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
-	HOM 5	CgSp LitterSoyWccVegNT	MuA	200	1.0	5	1.8	0.06	0
-	HOM 6	CgSp LitterSoyWccVegNT	FaA	200	1.0	5	2.8	-0.02	0
-	HOM 7	CgSp LitterSoyWccVegNT	MuA	200	1.0	5	1.8	0.06	0
-	HOM 8	CgSp LitterSoyWccVegNT	FgA	300	1.0	5	4.5	-0.15	0
-	HOM 9	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.06	0
-	HOM 10	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.06	0
-	HOM 11	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
-	HOM 12	CgSp LitterSoyWccVegNT	FgA	300	1.0	5	4.5	-0.15	0
-	HOM 13	CgSp LitterSoyWccVegNT	RkB	100	1.0	5	1.7	0.07	0
-	HOM 14	CgSp LitterSoyWccVegNT	HbB	200	1.0	5	2.8	-0.02	0
-	HOM 15	CgSp LitterSoyWccVegNT	FmB	200	1.0	5	1.8	0.05	0
-	INS 1	CgSp LitterSoyWccVegNT	HbB	300	1.0	5	2.9	-0.03	0
1271 - 1,2	JOH 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1024 - 1	MAJ 1	CgSp LitterSoyWccVegNT	KgB	100	1.0	5	1.1	0.11	0
-	MAJ 2	CgSp LitterSoyWccVegNT	RsA	200	1.0	5	1.2	0.10	0

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RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
-	MAJ 3	CgSp LitterSoyWccVegNT	RsA	300	1.0	5	1.3	0.10	0
1145 - 1-5	MOO 1	CgSp LitterSoyWccVegNT	HbA	300	1.0	5	2.9	-0.03	0
-	MOR 1	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
-	NAN 1	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
-	NUR 1A	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	1.8	0.33	13
-	NUR 1B	CgSp LitterCCSoyWNTVegPlas	MtA	120	1.0	5	4.9	-0.19	0
-	NUR 2	CgSp LitterCCSoyWNTVegPlas	MtA	120	1.0	5	4.9	-0.19	0
-	NUR 3	CgSp LitterSoyWccVegNT	HbB	200	1.0	5	2.6	-0.02	0
-	NUR 4	Cg2SpLitterSoyWccNTVegPlasCC	NsA	120	1.0	5	1.9	0.33	13
-	NUR 5	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	1.8	0.33	13
1036 - 1	OWE 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1037 - 1	OWE 2	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0
5377 - 1	OWE 3	CgSp LitterSoyWccVegNT	FgA	200	1.0	5	4.3	-0.14	0
1020 - 1	PHI 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1020 - 2	PHI 2A	CgSp LitterSoyWccVegNT	RkA	300	1.0	5	1.9	0.05	0

USDA NRCS Natural Resources Conservation Service

RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
-	PHI 2B	CgSp LitterSoyWccVegNT	IeA	300	1.0	5	1.9	0.05	0
-	PHI 2C	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1020 - 3	PHI 3A	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0
-	PHI 3B	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	1.8	0.33	13
-	PHI 4	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	2.8	0.33	13
-	PHI 5	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	1.8	0.33	13
-	PHI 6	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	1.6	0.33	13
-	PHI 7	CgSp LitterCCSoyWNTVegPlas	MtA	120	1.0	5	4.9	-0.19	0
-	PHI 8A	CgSp LitterSoyWccVegNT	RsB	300	1.0	5	1.3	0.10	0
-	PHI 8B	Cg2SpLitterSoyWccNTVegPlasCC	NsA	120	1.0	5	1.9	0.33	13
-	PHI 9A	CgSp LitterSoyWccVegNT	RkA	300	1.0	5	1.9	0.05	0
-	PHI 9B	CgSp LitterSoyWccVegNT	NnA	300	1.0	5	4.6	-0.16	0
-	PHI 10	CgSp LitterCCSoyWNTVegPlas	OtA	120	1.0	5		0.33	13
-	PHI 11	CgSp LitterCCSoyWNTVegPlas	MtA	120	1.0	5	1.6	0.36	13
-	PHI 12A	CgSp LitterSoyWccVegNT	HbB	300	1.0	5	2.9	-0.03	0

USDA NRCS Natural Resources Conservation Service

RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
-	PHI 12B	Cg2SpLitterSoyWccNTVegPlasCC	OtA	120	1.0	5	1.6	0.34	13
-	PHI 12C	CgSp LitterSoyWccVegNT	FgA	300	1.0	5	4.5	-0.15	0
-	REY 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
1129 - 2	RIC 1	CgSp LitterSoyWccVegNT	RwB	200	1.0	5	1.2	0.10	0
5324 - 1	RID 1	CgSp LitterSoyWccVegNT	CdA	300	1.0	5	1.3	0.10	0
-	RID 2	CgSp LitterSoyWccVegNT	GaA	300	1.0	5	1.3	0.10	0
1085 - 1	RIF 1	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
-	RIF 2	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
-	RIF 3	CgSp LitterSoyWccVegNT	FaA	300	1.0	5	2.9	-0.03	0
-	RIF 4	CgSp LitterSoyWccVegNT	WdA	300	1.0	5	2.9	-0.03	0
5192 - 1	SCH 1	CgSp LitterSoyWccVegNT	GaB	300	1.0	5	1.3	0.10	0
1136 - 1	SEG 1	CgSp LitterSoyWccVegNT	RsB	300	1.0	5	1.3	0.10	0
5167 - 1-6	SHE 1	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.06	0
1135 - 1,2	SHI 1	CgSp LitterSoyWccVegNT	RsA	300	1.0	5	1.3	0.10	0
1075 - 1-10	SHO 1	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0

USDA NRCS Natural Resources Conservation Service

RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
-	SMA 1	CgSp LitterSoyWccVegNT	HvA	300	1.0	5	2.4	0.01	0
1188 - 1,2	SMA 2	Cg2SpLitterSoyWccNTVegPlasCC	NsA	120	1.0	5	1.9	0.33	13
1102 - 2,4	SPE 1	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0
1015 - 1	STR 1	CgSp LitterSoyWccVegNT	KgB	300	1.0	5	1.2	0.10	0
-	TIL 1	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
-	TIL 2	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
-	TIL 3	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
1132 - 1,2	TOD 1	CgSp LitterSoyWccVegNT	RwA	300	1.0	5	1.3	0.10	0
1081 - 1	WAN 1	CgSp LitterSoyWccVegNT	HvA	300	1.0	5	2.4	0.01	0
-	WAN 2	CgSp LitterSoyWccVegNT	MuA	300	1.0	5	1.8	0.06	0
353 - 1	WEB 1	CgSp LitterSoyWccVegNT	HvA	300	1.0	5	2.4	0.01	0
5299 - 1	WIL 1	CgSp LitterSoyWccVegNT	HnA	300	1.0	5	2.4	0.01	0
-	WIL 2	CgSp LitterCCSoyWNTVegPlas	MtA	120	1.0	5	4.9	-0.19	0
5424 - 1	WIN 1	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0
-	WOH 1	CgSp LitterSoyWccVegNT	AsA	100	1.0	5	0.2	0.18	0

USDA NRCS Natural Resources Conservation Service

RUSLE2 Worksheet Erosion Calculation Record

FSA Tract/ Field Number	Field Name	Management	Soil Map Unit	Slope Length	Slope %	Soil T Value	Cons. plan soil loss	Soil conditioning Index (SCI)	STIR value
-	WOH 2	CgSp LitterSoyWccVegNT	RwB	200	1.0	5	1.2	0.10	0
-	WOH 3	CgSp LitterSoyWccVegNT	KgB	200	1.0	5	1.2	0.11	0
-	WOH 4	CgSp LitterSoyWccVegNT	RwB	200	1.0	5	1.2	0.10	0
-	WOH 5	CgSp LitterSoyWccVegNT	KgB	200	1.0	5	1.2	0.11	0
-	WOH 6	CgSp LitterSoyWccVegNT	HvA	200	1.0	5	2.3	0.01	0
-	WOH 7	CgSp LitterSoyWccVegNT	HvA	300	1.0	5	2.4	0.01	0
-	WOH 8	CgSp LitterSoyWccVegNT	HvA	150	1.0	5	2.3	0.02	0
-	WOH 9	CgSp LitterSoyWccVegNT	AsA	300	1.0	5	0.2	0.18	0
-	WOH 10	CgSp LitterSoyWccVegNT	RsA	300	1.0	5	1.3	0.10	0
5423 - 1	WRI 1	CgSp LitterSoyWccVegNT	RsB	300	1.0	5	1.3	0.10	0
-	WRI 2	CgSp LitterSoyWccVegNT	Ma	75	2.0	5	2.3	0.02	0
-	WRI 3	CgSp LitterSoyWccVegNT	RwB	300	1.0	5	1.3	0.10	0

Implementation Schedule for Land Treatment Area

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

Practice and Facility Implementation Schedule

Description	Date
All resource concerns have been addressed and no additional best management practices are recommended or required at this time.	June 2025

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

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

Calloway Brothers
Tammy Pope

Calloway Brothers

5-30-25

Date

SECTION 4: Nutrient Management

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

Soil Sampling and Testing

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

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

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

Manure and Wastewater Testing/Analysis

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

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

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

Description of Chemical Handling:

1. If used, most chemicals are custom applied. Minor chemicals (i.e. Bleach or Quat-A-Mone) may be stored at the operation for disinfecting purposes.

NUTRIENT MANAGEMENT

PLAN

CALLOWAY BROTHERS

2025

FERTILITY RECOMMENDATIONS

Prepared By:
McConnell Agronomics, Inc.
7735 Dyer Road
Denton, Maryland 21629
(410) 479-3664

Farm Operation:
JEANETTE CALLOWAY
8381 ATHOL ROAD
MARDELA MD 21837

WICOMICO COUNTY

(410) 251-6838
(410) 251-2443

Start Date: March 1, 2025 **End Date:** March 1, 2026

Nutrient Management Consultant:

McConnell Agronomics, Inc.
Luke McConnell
7735 Dyer Road
Denton, Maryland 21629

410-479-3664 Office
410-479-0564 Fax

#0053 Nutrient Management Certification Number (Delaware)

#2078 Nutrient Management License Number (Maryland)

#1045 Nutrient Management Certification Number (Maryland)

CALLOWAY BROTHERS
2023-2024 POULTRY MANURE

MANURE STORAGE

Billy's	40 X 60	220 Tons
Eddie's	40 X 130	481 Tons

POULTRY HOUSES

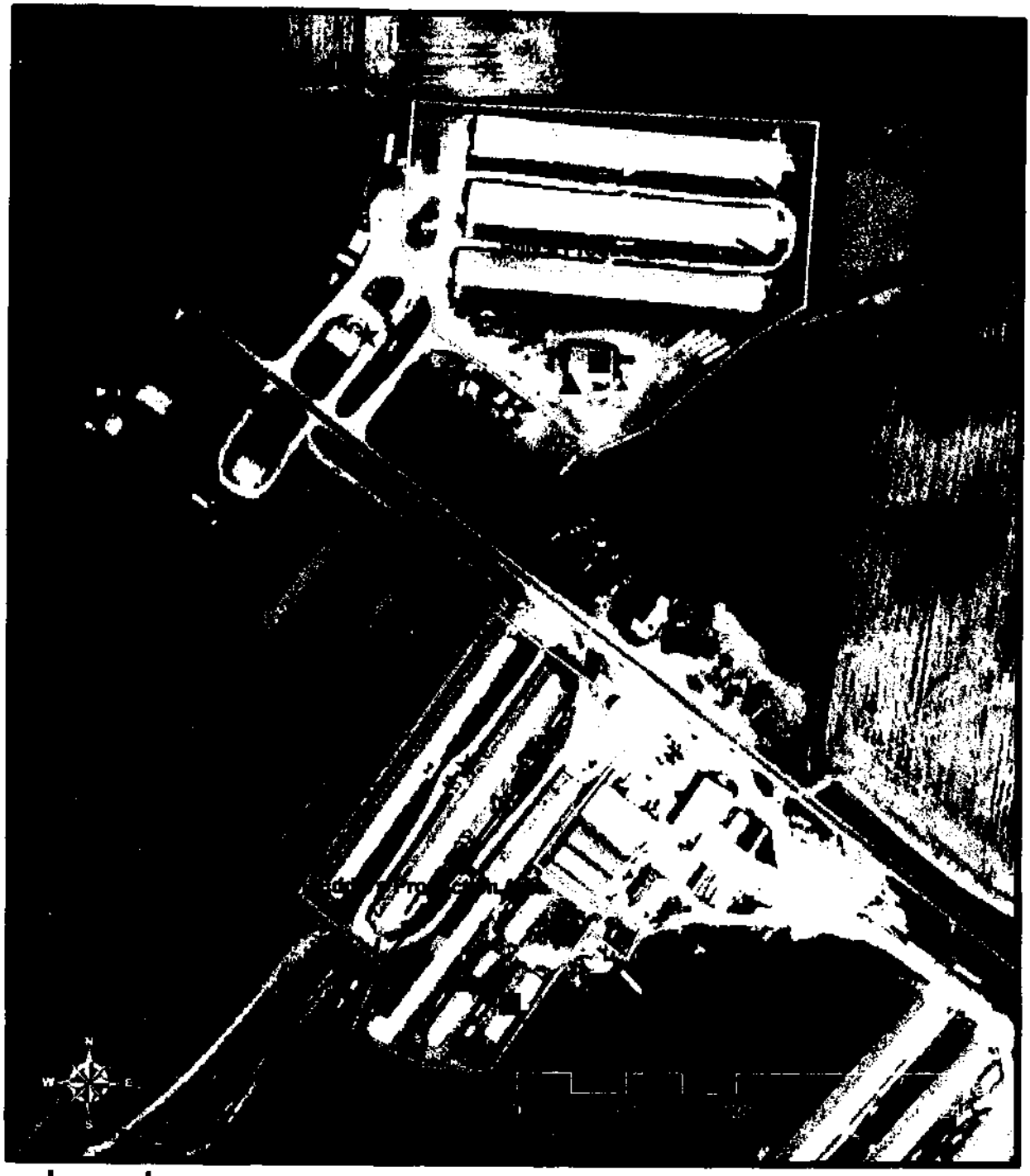
Billy's	3 Houses
Eddie's	3 Houses

COMPOSTERS

Billy's	2 Channel
Eddie's	4 Bin

Calloway Brothers utilizes all manure.

Calloway Brothers
Production Area



Legend

▲ Composter

■ PWSS

★ well

—— Water Flow Direction

Billys Production Area

Animal Mortality Disposal Method

Poultry
Composted

Manure Storage

Poultry
Manure shed as much as possible.

Manure Stored Outside: Manure is piled in a conical pile at least 6 feet high, at least 100 feet from ditches and waterways, 100 feet from any public road, and 200 feet from any residence not located on the landowner's property.

Staging of manure outside is allowed in Delaware for 90 days.

For all CAFO operations in Maryland staging or piling of any manure outside the manure storage building is only allowed for 14 days, unless properly covered.

PESTICIDE STORAGE & USAGE

Pesticides are stored in protected areas so as to not impact any waters of the state.
Pesticides are properly handled according to regulations.

SECTION 3: Manure and Animal Waste Handling and Storage

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

Production

Poultry

	Billys	Eddies
Bird Type	Broilers	Broilers
Number of Houses	3	3
Total # of Birds (all houses)	91,400	65,400
Number of Flocks per year	5	5
Average Bird Weight	7 lbs	7 lbs
Manure Generated/Produced in-house (tons/year)*	639	457
Manure Available for Utilization/Removed (tons/year)**	Variable	Variable

*See poultry litter quantity estimation sheets in the "Appendix" Section 10 of this plan.

***The "Manure Available for Utilization" quantity above was derived from an estimation calculation using the best available knowledge. However, operators must keep records of the actual:*

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

Collection

Crust out occurs between the five flocks per year, with approximately 40% of litter and crust removed. The remainder is windrowed in the houses. Full cleanout is scheduled every ten years. Plans to windrow each flock.

Storage

Two poultry waste storage structures (PWSS) are located on the operation, and were designed and constructed according to NRCS standards. Combined, the storage capacity is an estimated 41,280 cubic feet, or approximately 700 tons of manure. Based on cleanout schedules and amount of manure applied to Calloway Brothers farms annually, there is adequate storage capacity with both sheds.

Current Storage Conditions

Storage Structure Receiving Manure	Billys	Eddies
Size of Storage Structure	40x60 PWSS	40x130 PWSS
Storage Capacity	220 tons	481 tons

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

CALLOWAY BROTHERS
YIELD GOALS

Irrigated Field Corn	260 bushels per acre
Dry land Field Corn	160 bushels per acre
Full Season Soybeans	50 bushels per acre
Wheat	90 bushels per acre
Second Crop Soybeans	40 bushels per acre
Sorghum	90 bushels per acre
Watermelons	55,000 lbs per acre
Cantaloupes	22 tons per acre
Cucumbers	8 tons per acre
Squash	300 cwt per acre
Strawberries	17,000 lbs per acre

Yield goals determined from farmer's knowledge of past production.

CALLOWAY BROTHERS

FARM	ACRES	WATERSHED	LOC. CODE	TAX ID NO.
Adkins Historical #3787-6115	133.3	2130305	0198	[redacted]
Adkins, Earnest #3705-6051	10.1	2130305	0198	
Adkins, Jimmy #311-1210	30.3	2130305	0198	
	3.2	2130305	0198	
Ashcraft, Steve #153-1036	77.3	2130305	0198	
Ashton, Alfred #147-1030	49.0	2130305	0198	
Austin, M #257-1146	70.0	2130305	0198	
Beauchamp, Roy #294-1188	11.2	2130305	0198	
Beazer East #1482-306	29.0	2130301	0196	
	18.0	2130301	0196	
	21.0	2130301	0196	
	14.0	2130301	0196	
Burnett, King #3039-5746	11.7	2130305	0198	
	24.8	2130305	0198	
	44.7	2130305	0198	
Calloway, Denise #239-1128	22.9	2130305	0198	
	2.0	2130305	0198	
Calloway, Tommy #2152-1020	30.7	2130305	0198	
Catlin #209-1098	17.1	2130305	0198	
	16.3	2130305	0198	
	16.8	2130305	0198	
	2.0	2130305	0198	
	6.7	2130305	0198	
Collins, Joe #2601-5424	110.0	2130305	0198	
Corbett, Anita #1531-368	80.4	2130305	0198	
Dietz, Leonard #3785-6113	29.5	2130305	0198	
Drewer, Elizabeth #354-1216	25.5	2130305	0198	

CALLOWAY BROTHERS

FARM	ACRES	WATERSHED	LOC. CODE	TAX ID NO.
Dyer, Will #3738-6070	24.9	2130305	0198	[redacted]
Edwards, John #3789-6117	97.3	2130305	0198	
Eichelberger, Robert #1535-394	59.7	2130305	0198	
Freed, Terry #241-2871	31.9	2130301	0196	
Glasgow, Elizabeth #1577-450	20.1	2130305	0198	
	2.0	2130305	0198	
Green, Tracy #3109-1103/1104	1.0	2130305	0198	
	1.1	2130305	0198	
	1.1	2130305	0198	
	2.9	2130305	0198	
Hales-Collins #3217-6119	32.9	2130301	0196	
	15.7	2130301	0196	
	26	2130301	0196	
	68	2130301	0196	
Hales-Glasgow #3288-5797	27.2	2130301	0196	
Hales-Hotten #868-1797	20.32	2130301	0196	
	10.1	2130301	0196	
	8.8	2130301	0196	
	0.97	2130301	0196	
	0.47	2130301	0196	
Hales-Jenkins Terrapin #3214-1879	19	2130305	0034	
	20	2130305	0034	
	20	2130305	0034	
Hales-Jenkins Warwick #3214-1879	120	2130301	0196	
Hales-Luffman #756-1695	29.9	2130301	0196	
	26.4	2130301	0196	
	4.4	2130301	0196	
Hales-Packing Shed #1624-485	13.8	2130301	0196	
	59.9	2130301	0196	
	29.6	2130301	0196	

CALLOWAY BROTHERS

FARM	ACRES	WATERSHED	LOC. CODE	TAX ID NO.
Hales Packing Shed (Left) #3216-1662	10.9	2130301	0196	[redacted]
	11.5	2130301	0196	
Hales-Philips #2778-810	26	2130301	0196	
	5	2130301	0196	
	5	2130301	0196	
Hales-Pusey, Elton #1626-930	111.7	2130301	0196	
Hales-Tom Hall #1995-5094	40.14	2130301	0196	
Hales-MaloneAG #4007-6312	106.7	2130301	0196	
Hales-Walmart #758-1554	83.4	2130301	0196	
Hales-Poly Walston #1610-473	57	2130301	0196	
	2	2130301	0196	
Hatton, Faye #229-1118	20.7	2130305	0198	
	13.5			
Hensley, B #1481-305	21.1	2130301	0196	
	27.4			
Hochmoth, Bill #3138-5757	331.6	2130305	0198	
Hochmuth, Pat #3139-5758	331.6	2130305	0198	
Home #3527-395	31.0	2130305	0198	
	2.0			
	13.4			
	215.9	2130305	0198	
	66.1	2130305	0198	
Home, Bobby's #3596-1023				
B1	13.9	2130305	0198	
	1.5	2130305	0198	
Home, Doug's #3527-5167	28.0	2130305	0198	
	22.9	2130305	0198	
	52.8	2130305	0198	
	23.7	2130305	0198	
Home, Hunt Club #2263-1085	74.6	2130305	0198	

CALLOWAY BROTHERS

FARM	ACRES	WATERSHED	LOC. CODE	TAX ID NO.
Home, Lloyd #3527-2339	23.1	2130305	0198	[redacted]
Home, Mary's #3596-1024	13.9	2130305	0198	
	14.4	2130305	0198	
Home, Nan's #3527-1119	69.3	2130305	0198	
Home, Tank Farm #3527-1022	52.8	2130305	0198	
Johnson-Upper Ferry #1484-308	11.3	2130301	0196	
	10.4			
	10.4			
Johnson, George #368-1271	13.0	2130305	0198	
Kenny, David #1463-6332	4.8	2130305	0198	
	14.8	2130305	0198	
Moore, Pat #256-1145	39.8	2130305	0198	
	20.1	2130305	0198	
Morgan, William #244-1133	61.0	2130305	0198	
Nashay, Frank	70.0	2130305	0198	
Owens, Sally #154-1037	32.2	2130305	0198	
Owens, Frances #2529-5377	25.9	2130305	0198	
	4.0	2130305	0198	
Palecheck, Bill - #3227-1062	146.7	2130307	34	
Palecheck, Bill - #3228-1797	96.2	2130307	34	
Palecheck, Bill - #3361-2579	18.6	2130307	34	
	100.0	2130307	34	
Phillips, B - Dave's Sport #3738-241+23	22.6	2130305	0198	
	20.0	2130305	0198	
	12.6	2130305	0198	

CALLOWAY BROTHERS

FARM	ACRES	WATERSHED	LOC. CODE	TAX ID NO.
Phillips, Home #3738-6070	73.7	2130305	0198	[redacted]
	14.0	2130305	0198	
	10.7	2130305	0198	
Phillips, B. - Home 3738-6072	12.6	2130305	0198	
Phillips, B. - RockaWalkin #3745-6016	160.0	2130305	0198	
	10.0	2130305	0198	
Phillips, B. - Tower #3738-883	86.2	2130305	0198	
	13.1	2130305	0198	
Phillips, G - Nutters #3737-240	217.3	2130305	0198	
Phillips, G - Paige #3737-234	49.6	2130305	0198	
Phillips, M. - Home #3740-6069	22.5	2130305	0198	
	229.5	2130305	0198	
Phillips, M. - Home Right #3740-6071	229.5	2130305	0198	
	50.0	2130305	0198	
Phillips, M - Twilley #3741-242	76.8	2130305	0198	
	142.5	2130305	0198	
Phillips, V - Home #3739-6068	102.0	2130305	0198	
Phillps, V - Twilley #3739-239	102.5	2130305	0198	
Pilchard, Paige #1540-401	79.6	2130305	0198	
	28.3	2130305	0198	
Reynolds, Will #1230-1013	48.1	2130305	0198	
	6.6	2130305	0198	
Saulsbury, Joby's #3706-6052	26.4	2130305	0198	
Saulsbury, Sandra #3965-5601	24.0	2130305	0198	
Schnoor, Fred #2227-5192	23.7	2130305	0198	
Sheman, Louise #1532-1532	18.7	2130305	0198	

CALLOWAY BROTHERS

FARM	ACRES	WATERSHED	LOC. CODE	TAX ID NO.
Shiles, April#3242-1135	24.9	2130305	0198	[redacted]
Shockley #190-1075	22.5	2130305	0198	
	51.8	2130305	0198	
	1.5	2130305	0198	
	96.3	2130305	0198	
Spear #213-1102	21.9	2130305	0198	
	34000 sq.ft	2130305	0198	
Taylor-White, R #437-1327	104.7	2130301	0196	
Todd #243-1132	57.8	2130305	0198	
Twilley, Eric #4049-6384	50.0	2130301	0196	
Wang, Henry #3528-1081	119.8	2130305	0198	
	28.5	2130305	0198	
Webster, P #1510-353	143.0	2130305	0198	
Wilson, Donald #263-1154	30.8	2130305	0198	
	28.1	2130305	0198	
Wilson, S. #2396-5299	5.8	2130305	0198	
	2.4	2130305	0198	
Woglhman, G. #149-1032	22.4	2130305	0198	
	163.4	2130305	0198	
	14.1	2130305	0198	

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Adkins Historical #3787-6115					
ADH1		24.9	Field Corn	Milo	Milo
ADH2		28.2	Field Corn	Milo	Milo
		53.1			
Adkins, Earnest #3705-6051					
EA2		7.4	FS Soybeans	FS Soybeans	Watermelons
Adkins, Jimmy #311-1210					
JA1	I	16.4	FS Soybeans	Milo	FS Soybeans
Ashcraft, Steve #153-1036					
AO1	I	16.3	FS Soybeans	Field Corn	Watermelons
AO2		11.3	FS Soybeans	Milo	Milo
		27.6			
Ashton, Alfred #147-1030					
AA1		5.2	FS Soybeans	Milo	Milo
AA2		5.7	FS Soybeans	Milo	Milo
AA3		1.3	FS Soybeans	Milo	Milo
AA4		4.1	FS Soybeans	Milo	Milo
AA5		7.9	FS Soybeans	Milo	Milo
		24.2			
Beazer East #1482-306					
BE1A		7.3	Field Corn	Field Corn	Field Corn
BE1B		5.8	FS Soybeans	Field Corn	Field Corn
BE3		18.6	FS Soybeans	Field Corn	Field Corn
BE4		18.7	FS Soybeans	Field Corn	Field Corn
BE5		9.4	FS Soybeans	Field Corn	Field Corn
		59.8			

CALLOWAY BROTHERS
CROP ROTATION

FIELD IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Burnett, King #3039-5746				
KB4	5.4	Milo	Milo	Field Corn
KB6	1.8	Milo	Milo	Field Corn
KB10	3.7	Milo	Milo	Field Corn
	10.9			
Calloway, Tommy #2152-1020				
TC1	4.1	Field Corn	Field Corn	FS Soybeans
TC2	14.1	Field Corn	Field Corn	FS Soybeans
	18.2			
Catlin #209-1098				
CAT2	3.8	Field Corn	Wheat/Milo	Field Corn
CAT3+4	10.3	Field Corn	Wheat/Milo	Field Corn
CAT5	16.7	Field Corn	Wheat/Milo	Field Corn
CAT6	3.9	Milo	Wheat/Milo	Field Corn
CAT7	1.6	Milo	Wheat/Milo	Field Corn
CAT8	4.0	Field Corn	Wheat/Milo	Field Corn
CAT9	7.0	Field Corn	Wheat/Milo	Field Corn
CAT10	1.8	Milo	Wheat/Milo	FS Soybeans
	49.1			
Dietz, Leonard #3785-6113				
LD1	9.5	Milo	Milo	Field Corn
Dyer, Will #4041-6466				
WD1A	6.4	Watermelons	Field Corn	FS Soybeans
WD1B	4.3	Field Corn	Field Corn	FS Soybeans
	10.7			

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Edwards, John #3789-6117					
JE3		23.3	Field Corn	Field Corn	Watermelons or Sorghum
JE5		11.0	Field Corn	Field Corn	Watermelons or Sorghum
JE6		11.2	Field Corn	Field Corn	Watermelons or Sorghum
JE7+8		11.3	Field Corn	Field Corn	Watermelons or Sorghum
		56.8			
Eichelberger, Robert #1535-394					
RE1		8.5	Field Corn	Field Corn	FS Soybeans
RE2		16.6	Field Corn	Field Corn	FS Soybeans
		25.1			
Freed, Terry #241-2871					
GE1		16.2	Field Corn	Field Corn	FS Soybeans
Glasgow, Elizabeth #1577-450					
EG1	I	20.1	FS Soybeans	Milo	Watermelons
Hales Collins #3217-6119					
HBC1		44.9	--	Field Corn	Watermelons or FS Soybeans
HBC2		62.1	--	Field Corn	Watermelons or FS Soybeans
		107.0			
Hales Glasgow #3288-5797					
HG1		22.4	--	FS Soybeans	Field Corn
Hales Hotten #868-1797					
HH1		33.2	Watermelons	FS Soybeans	Field Corn
Hales Jenkins Terrapin #3214-1879					
HJT1		18.3	--	Melon	Field Corn
HJT2		15.7	--	Melon	Field Corn
		34.0			

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Hales Jenkins Warwick #3214-1878					
HJ1		19.6	--	Melon	Field Corn
HJ2		47.6	--	FS Soybeans	Field Corn
		67.2			
Hales Luffman #756-1695					
HWL1	I	42.1	--	FS Soybeans	Field Corn
Hales Packing Shed #1624-485					
HPS1		11.4	--	Field Corn	Watermelons or Field Corn
HPS2		25.3	--	Field Corn	Watermelons or Field Corn
		36.7			
Hales Packing Shed (Left) #3216-1662					
HPL		10.3	--	Field Corn	Watermelons or Field Corn
Hales Packing Shed (Right) #3216-1661					
HPR		11.4	--	Field Corn	Watermelons or Field Corn
Hales Phillips, B. #2778-810					
HP1		36.7	--	Field Corn	FS Soybeans
Hales Pusey, Elton #1626-930					
HEP1		46.3	--	Melons	Field Corn
Hales Tom Hall #1995-5094					
HTH1		38.1	--	Field Corn	Watermelons or Field Corn
Hales MaloneAG #4007-6312 + #4174-6498					
HM1		6.0	--	Field Corn	Watermelons or Field Corn
HM2		6.1	--	Field Corn	Watermelons or Field Corn

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Hales Walmart #728-1554					
HWM1		24.6	--	FS Soybeans	Watermelons or FS Soybean
HWM2		39.5	--	FS Soybeans	Watermelons or FS Soybean
		64.1			
Hales Poly Walston #1610-473					
HPW1		42.5	Watermelons	FS Soybeans	Corn
Hatton, Faye #229-1118					
FH1		4.2	Field Corn	Milo	FS Soybeans
FH2		2.4	Field Corn	Milo	FS Soybeans
		6.6			
Hensley, B #1481-305					
HN1		6.0	Field Corn	Field Corn	FS Soybeans
HN2		5.7	Field Corn	Field Corn	FS Soybeans
HN3		15.4	Field Corn	Field Corn	FS Soybeans
		27.1			
Hochmoth, Bill #3138-5757					
BH1	I	5.4	Field Corn	FS Soybeans	FS Soybeans
BH2	I	24.5	Field Corn	FS Soybeans	FS Soybeans
		29.9			

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Hochmuth, Pat #3139-5758					
PH1		6.1	--	FS Soybeans	Watermelons
PH2		30.6	--	FS Soybeans	Watermelons
PH3		8.3	--	FS Soybeans	Watermelons
PH4		21.0	--	FS Soybeans	Watermelons
PH5A		8.0	--	FS Soybeans	Watermelons
PH5B		48.4	Watermelons	--	--
PH6		47.7	--	--	not rented, 4 year rotation
		170.1			
Home #3527-395					
H1		16.0	FS Soybeans	Field Corn	FS Soybeans
H2		25.8	FS Soybeans	Field Corn	FS Soybeans
H3	I	10.8	FS Soybeans	Field Corn	FS Soybeans
H4		24.5	FS Soybeans	Melons	FS Soybeans
H5		2.3	FS Soybeans	Melons	FS Soybeans
H7	I	6.2	FS Soybeans	Melons	FS Soybeans
H8	I	6.3	FS Soybeans	Melons	FS Soybeans
H9	I	13.1	FS Soybeans	Melons	FS Soybeans
H11	I	15.0	FS Soybeans	Field Corn	FS Soybeans
H12	I	14.2	FS Soybeans	Field Corn	FS Soybeans
H13	I	18.9	FS Soybeans	Field Corn	FS Soybeans
H14	I	8.3	FS Soybeans	Field Corn	FS Soybeans
H15	I	8.3	FS Soybeans	Field Corn	FS Soybeans
H16	I	1.0	FS Soybeans	Field Corn	FS Soybeans
H17	I	1.2	FS Soybeans	Field Corn	FS Soybeans
H18		8.6	FS Soybeans	Field Corn	FS Soybeans
H19		7.2	FS Soybeans	Field Corn	Watermelons
		187.7			

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Home, Bobby and Mary #3596-1023/1024					
B1	I	17.0	Field Corn	Field Corn	Watermelons
B2	I	4.4	Field Corn	Field Corn	FS Soybeans
		21.4			
Home, Doug's #3527-5167					
HD2		12.4	FS Soybeans	FS Soybeans	Field Corn or Watermelons
HD5		1.0	FS Soybeans	FS Soybeans	Field Corn or Watermelons
HD6		10.2	FS Soybeans	FS Soybeans	Field Corn or Watermelons
		23.6			
Home, Hunt Club #2263-1085					
HC1	I	30.7	Field Corn	Field Corn	Field Corn
HC2	I	39.8	FS Soybeans	Field Corn	Field Corn
		70.5			
Home, Lloyd #3527-2339					
HL1	I	6.1	Field Corn	Field Corn	Watermelons
Home, Nan's #3527-1119					
N1	I	22.4	Watermelons	Field Corn	FS Soybeans
N2	I	4.4	Watermelons	Field Corn	FS Soybeans
N3	I	7.6	Watermelons	Field Corn	FS Soybeans
N4	I	12.2	Watermelons	Field Corn	FS Soybeans
		46.6			
Home, Tank Farm #3527-1022					
HT1	I	7.4	Field Corn	Watermelons	FS Soybeans
HT2	I	3.9	Field Corn	Watermelons	FS Soybeans
HT3	I	18.7	Field Corn	Watermelons	FS Soybeans
HT4	I	21.5	Field Corn	Watermelons	FS Soybeans
		51.5			

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Johnson-Upper Ferry #1484-308					
J1		12.7	Field Corn	Field Corn	Milo
J2		9.9	Field Corn	Field Corn	Milo
		22.6			
Kenny, David #1463-6332					
DK1	I	8.0	FS Soybeans	Milo	FS Soybeans
Moore, Pat #256-1145					
PM1+2		2.9	Wheat/Soybeans	Idle	Idle
PM3		13.5	Wheat/Soybeans	Field Corn	Milo
PM4		9.7	Wheat/Soybeans	Field Corn	Milo
		26.1			
Morgan, William #244-1133					
WM1		5.9	Milo	Milo	Field Corn or Milo
WM2		10.0	Milo	Milo	Field Corn or Milo
		15.9			
Nashay, Frank #257-1146 + #3041-5748					
FN1		9.0	Wheat/Sorghum	Field Corn	Field Corn
FN2		5.0	Wheat/Sorghum	Field Corn	Field Corn
FN3		10.7	--	--	Field Corn
		14.0			
Owens, Frances #2529-5377					
FO1	I	14.3	FS Soybeans	Field Corn	Watermelons
FO2+3		5.6	FS Soybeans	Milo	Milo
FO4+5		6.4	FS Soybeans	Milo	Milo
		26.3			

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Owens, Sally #154-1037					
AOM1	I	19.7	FS Soybeans	Field Corn	Watermelons
AOM2		3.2	FS Soybeans	Milo	Milo
		22.9			
Palecheck, Bill - #3227-1062					
DBP1	I	32.5	Field Corn	Watermelons	FS Soybeans
DBP2	I	31.7	Field Corn	Watermelons	FS Soybeans
DBP3	I	10.6	Field Corn	Watermelons	FS Soybeans
		74.8			
Palecheck, Bill - #3228-1797					
PC1		8.1	Milo	Wheat/Milo	Field Corn
PC2		3.6	Milo	Wheat/Milo	Field Corn
PC3		10.8	Milo	Wheat/Milo	Field Corn
PC5		13.3	Milo	Wheat/Milo	Field Corn
PC6		14.0	Milo	Wheat/Milo	Field Corn
PC7+9		7.2	Milo	Wheat/Milo	Field Corn
PC8		6.4	Milo	Wheat/Milo	Field Corn
PC10		10.8	Milo	Wheat/Milo	Field Corn
PC11		7.7	Milo	Wheat/Milo	Field Corn
PC12		4.8	Milo	Wheat/Milo	Field Corn
		86.7			
Palecheck, Bill #3361-2579					
PCU1		10.6	Wheat/Soybeans	Milo	Field Corn
PCU2		26.4	Wheat/Soybeans	Milo	Field Corn
PCU3		31.7	Wheat/Soybeans	Milo	Field Corn
		68.7			

CALLOWAY BROTHERS
CROP ROTATION

FIELD IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Phillips, B-Home #3738-6070				
BPH2A	10.1	Field Corn	FS Soybeans	Field Corn
BPH2B	15.7	Watermelons	Field Corn	FS Soybeans
	25.8			
Phillips, B. - Tower #3738-883				
BPT1A	10.7	Watermelons	Field Corn	FS Soybeans
BPT1B	32.9	Field Corn	Field Corn	FS Soybeans
BPT2	30.9	Watermelons	Field Corn	FS Soybeans
	74.5			
Phillips, G - Nutters #3737-240				
GPM1A	37.2	Field Corn	Milo	Field Corn
GPM1B	43.1	Field Corn	FS Soybeans	Field Corn
GPM2	3.2	Field Corn	FS Soybeans	Field Corn
GPM3	35.8	Field Corn	FS Soybeans	Field Corn
	119.3			
Phillips, G - Paige #3737-234				
GP1	11.0	Milo	Milo	FS Soybeans
GP2	11.3	Milo	Milo	FS Soybeans
GP3	7.0	Milo	Milo	FS Soybeans
GP4	5.1	Milo	Milo	FS Soybeans
	34.4			
Phillips, M. - Home #3740-6069				
MPH1	22.8	Field Corn	FS Soybeans	Field Corn
MPH2	30.0	Field Corn	FS Soybeans	Field Corn
MPH5	20.6	Field Corn	FS Soybeans	Field Corn
MPH6+7	19.3	Field Corn	FS Soybeans	Field Corn
MPH8	15.7	Field Corn	FS Soybeans	Field Corn
	108.4			

CALLOWAY BROTHERS
CROP ROTATION

FIELD IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Phillips, M. - Home Right #3740-6071				
MPR1+4	7.4	Milo	FS Soybeans	Field Corn
MPR2+3	7.5	Milo	FS Soybeans	Field Corn
	14.9			
Phillips, M - Twilley #3741-242				
MGP1	9.1	FS Soybeans	Field Corn	Field Corn or FS Soybeans
MGP2+3	5.3	FS Soybeans	Field Corn	Field Corn or FS Soybeans
	14.4			
Phillips, V - Home #3739-6068				
VP1	26.6	Field Corn	FS Soybeans	Field Corn
VP2	31.9	Field Corn	FS Soybeans	Watermelons
VP3+4	15.0	Field Corn	FS Soybeans	Watermelons
VP5+6	19.6	Field Corn	FS Soybeans	Watermelons
	93.1			
Phillips, V. - RockaWalkin #3745-6016				
BPR1B	27.5	Field Corn	Soybeans	Wheat/Soybeans
BPR1F	46.3	Field Corn	Soybeans	Wheat/Soybeans
BPR2B	38.9	Field Corn	Soybeans	Wheat/Soybeans
BPR2F	32.2	Field Corn	Soybeans	Wheat/Soybeans
	144.9			
Phillps, V - Twilley #3739-239				
VPT1+4	10.0	FS Soybeans	Field Corn	Field Corn or FS Soybeans
VPT2	70.0	FS Soybeans	Field Corn	Field Corn or FS Soybeans
VPT3	9.4	FS Soybeans	Field Corn	Field Corn or FS Soybeans
	89.4			

CALLOWAY BROTHERS
CROP ROTATION

FIELD IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Pilchard, Paige #1540-401				
PPA1	42.0	Field Corn	Field Corn	FS Soybeans
PPA2	19.2	Field Corn	Field Corn	FS Soybeans
PPA3	41.0	Field Corn	Field Corn	FS Soybeans
	102.2			
Reynolds, Will #1230-1013				
WR1	8.9	FS Soybeans	Milo	Milo
WR2	13.6	Field Corn	Field Corn	Field Corn
	22.5			
Saulsbury, Joby #3706-6052				
JS1	12.2	FS Soybeans	FS Soybeans	Watermelons
JS3	6.5	FS Soybeans	FS Soybeans	Watermelons
JS4	2.1	FS Soybeans	FS Soybeans	Watermelons
	20.8			
Saulsbury, Sandra #3965-5601				
S1	13.4	Watermelons	Field Corn	FS Soybeans
S2	4.3	FS Soybeans	Field Corn	FS Soybeans
S3	2.6	FS Soybeans	Field Corn	FS Soybeans
	20.3			
Sheman, Louise #1532-1532				
LS1	16.4	Watermelons	Milo	FS Soybeans
Shiles, April #3242-1135				
AS2A	7.3	Field Corn	Milo	Milo
AS2B	5.9	Field Corn	Milo	Milo
	13.2			

CALLOWAY BROTHERS
CROP ROTATION

FIELD IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Shockley #190-1075				
SH2	11.3	Field Corn	Milo	Milo
SH3	1.5	Field Corn	Milo	Milo
SH4+9	8.3	Field Corn	Milo	Milo
SH5	3.0	Field Corn	Milo	Milo
SH6	5.8	Field Corn	Milo	Milo
SH7	12.7	Field Corn	Milo	Milo
SH8	2.0	Field Corn	Milo	Milo
	44.6			
Spear #213-1102				
SP1	0.3	--	Watermelons	Field Corn
SP2	11.0	FS Soybeans	Watermelons	Field Corn
SP4	5.4	FS Soybeans	Watermelons	Field Corn
	16.7			
Todd #243-1132				
T1	11.5	Field Corn	Wheat/Milo	Watermelons or Milo
T2	3.1	Field Corn	Wheat/Milo	Watermelons or Milo
	14.6			
Twilley, Eric #4049-6084				
ET1	24.0	FS Soybeans	Field Corn	Melon or Field Corn
ET2	21.9	FS Soybeans	Field Corn	Melon or Field Corn
	45.9			
Wang, Henry #3528-1081				
HW1	32.1	Field Corn	Watermelons	FS Soybeans
HW2	13.1	Field Corn	Watermelons	FS Soybeans
	45.2			

CALLOWAY BROTHERS
CROP ROTATION

FIELD IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Webster, P #1510-353				
BR1	22.0	Watermelons	Field Corn	FS Soybeans
BR2	6.5	Watermelons	Field Corn	FS Soybeans
BR3	3.7	Field Corn	Field Corn	FS Soybeans
BR4	7.3	Field Corn	Field Corn	FS Soybeans
BR5	3.4	Field Corn	Field Corn	FS Soybeans
	42.9			
White, Taylor R #437-1327				
TW1	12.6	Field Corn	Field Corn	Milo
TW2	4.7	Field Corn	Field Corn	Milo
TW3	5.5	Field Corn	Field Corn	Milo
TW4	2.9	Field Corn	Field Corn	Milo
	25.7			
Wilson, Donald #263-1154				
DW1+2	8.4	Field Corn	Wheat/Milo	Field Corn
DW3	13.4	Field Corn	Wheat/Milo	Field Corn
DW4	5.9	Field Corn	Wheat/Milo	Field Corn
	27.7			
Wilson, S. #2396-5299				
LW1	7.0	Soybeans	Milo	Watermelons or FS Soybeans

CALLOWAY BROTHERS
CROP ROTATION

FIELD	IRR	ACRES	2023 CROP	2024 CROP	PLANNED 2025 CROP
Woglhman, George #149-1032					
EP1		23.2	Field Corn	Milo	Milo or Field Corn
EP2		19.7	Field Corn	Milo	Milo or Field Corn
EP3		39.0	Field Corn	Milo	Milo or Field Corn
		81.9			
		3173.4	**Total Acres**		

MCCONNELL AGRONOMICS
NITROGEN CREDITS FROM MANURE AND PREVIOUS CROPS

Fertilizer is based on average yields given at the beginning of these recommendations. If there is a variance in the yield potential for specific fields or irrigation is added, there should be adjustments made in fertilizer rates, particularly nitrogen.

If soybeans were planted the previous year, there should be a 15 lb. nitrogen credit given for all of this year's crops requiring nitrogen fertilizer.

If manure was applied the previous year, there should be a nitrogen credit given for this year's crops. Residual nitrogen from manure is calculated on a separate sheet for each field.

<u>This Plan Was Developed to Use For 2025 Crops.</u>

The following is a list of situations that will impact whether or not the attached Nutrient Management Plan will need updating before the end of the time period for the which the plan was developed.

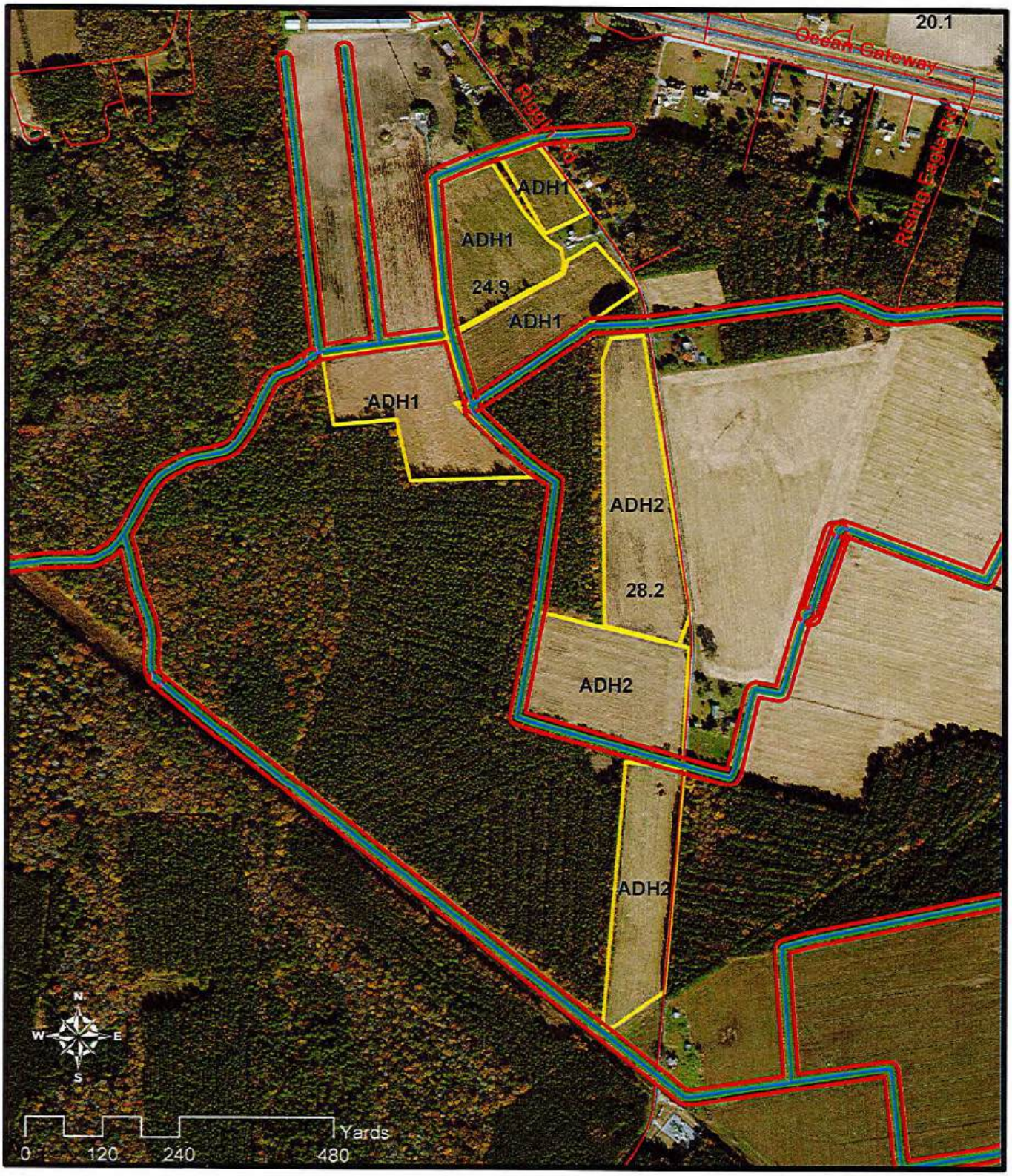
1) A change to the planned crop or cropping rotation, or introduction of a new crop not currently addressed in the existing nutrient management plan.

2) A change in nutrient source or soil test results

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.

Calloway Brothers
Adkins Historical Setback



2/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Earnest Adkins, Alfred Ashton, Will Reynolds, Joby Saulsbury, & George Woglhman Setback

2/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Jimmy Adkins, Elizabeth Glasgow, & David Kenny Setback

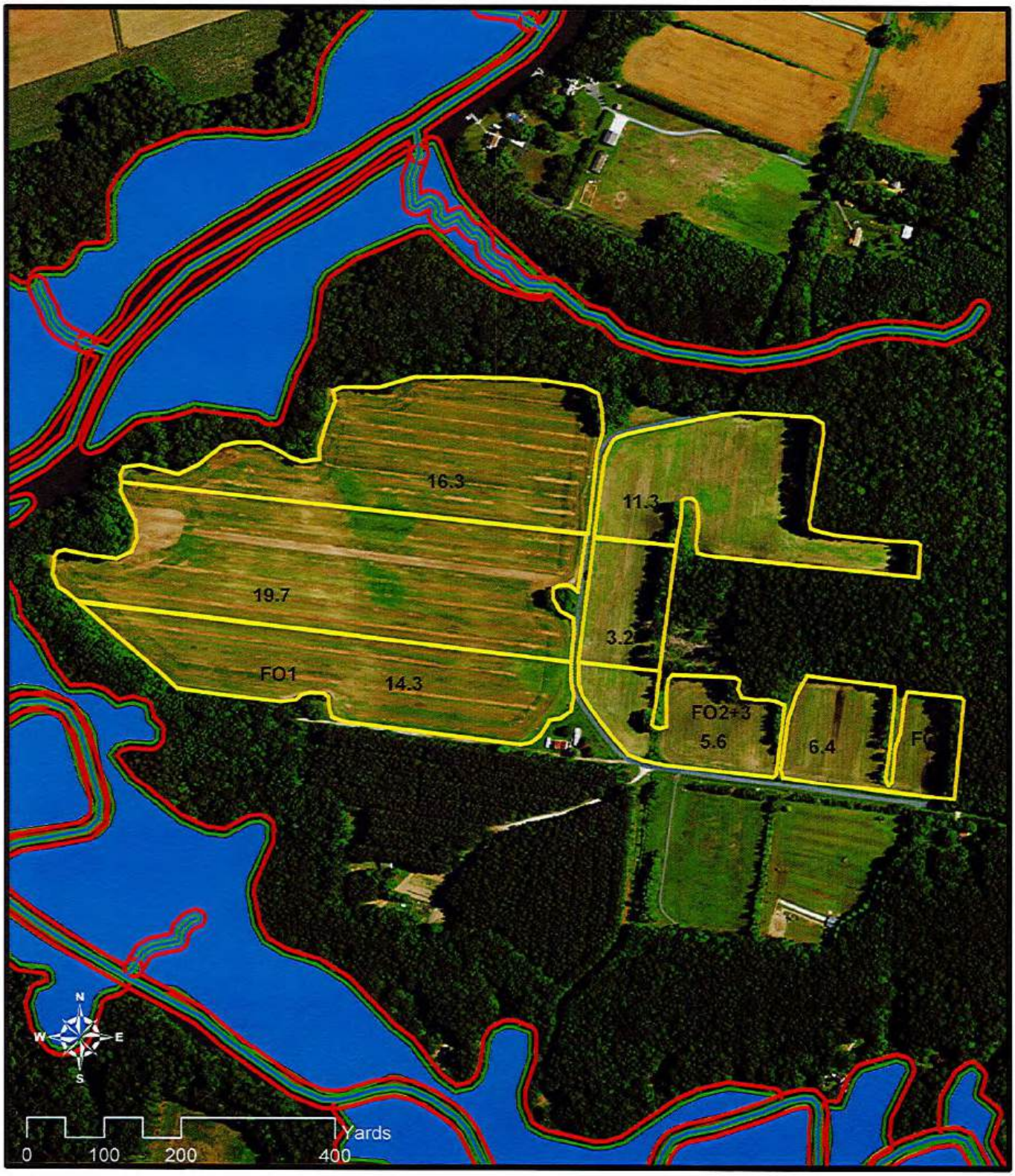
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Steve Ashcraft, Sally & Frances Owens Setback



3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Beazer East Setback

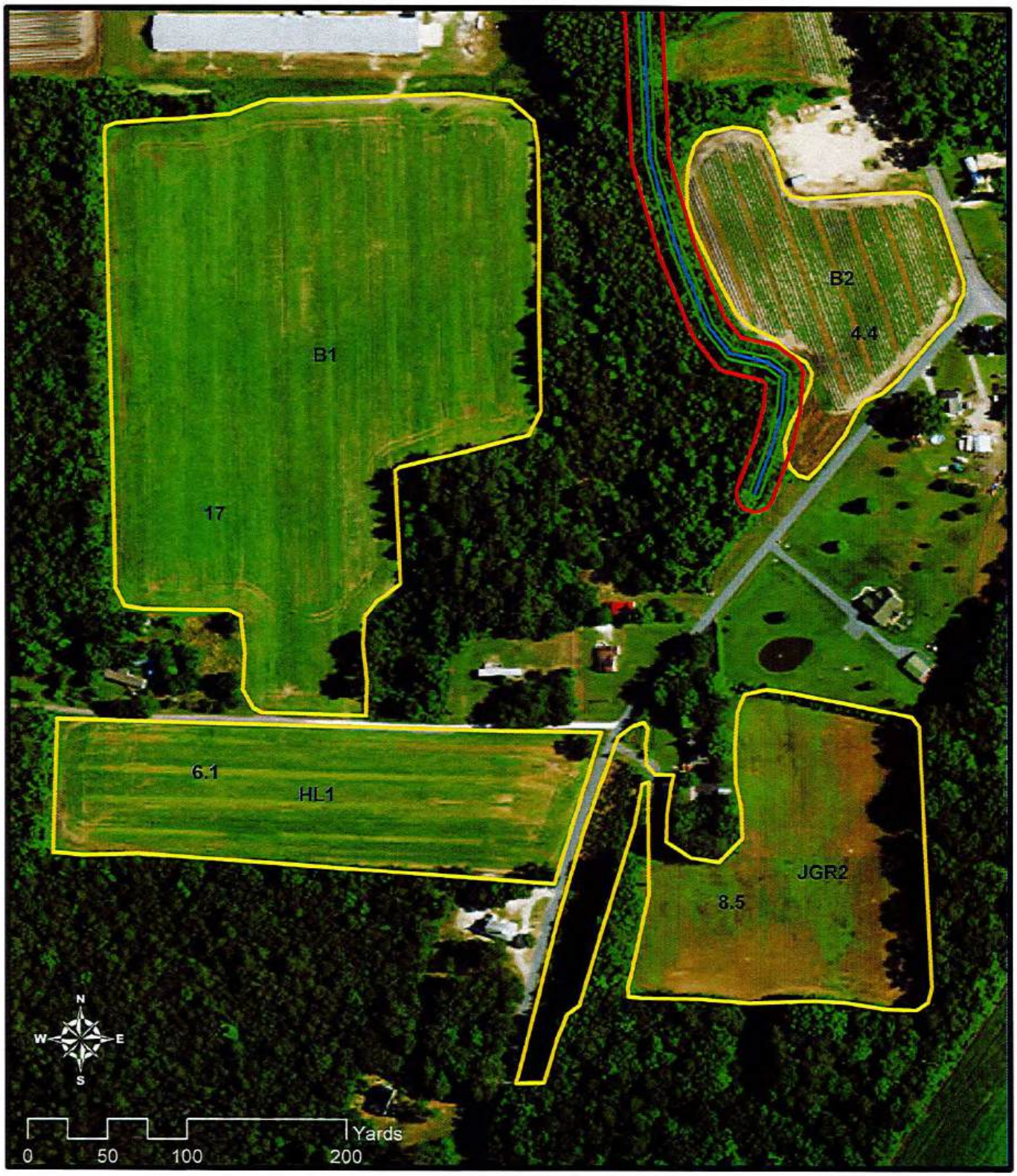
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Bobby's, Jeff Gambrill, & Lloyd Setback



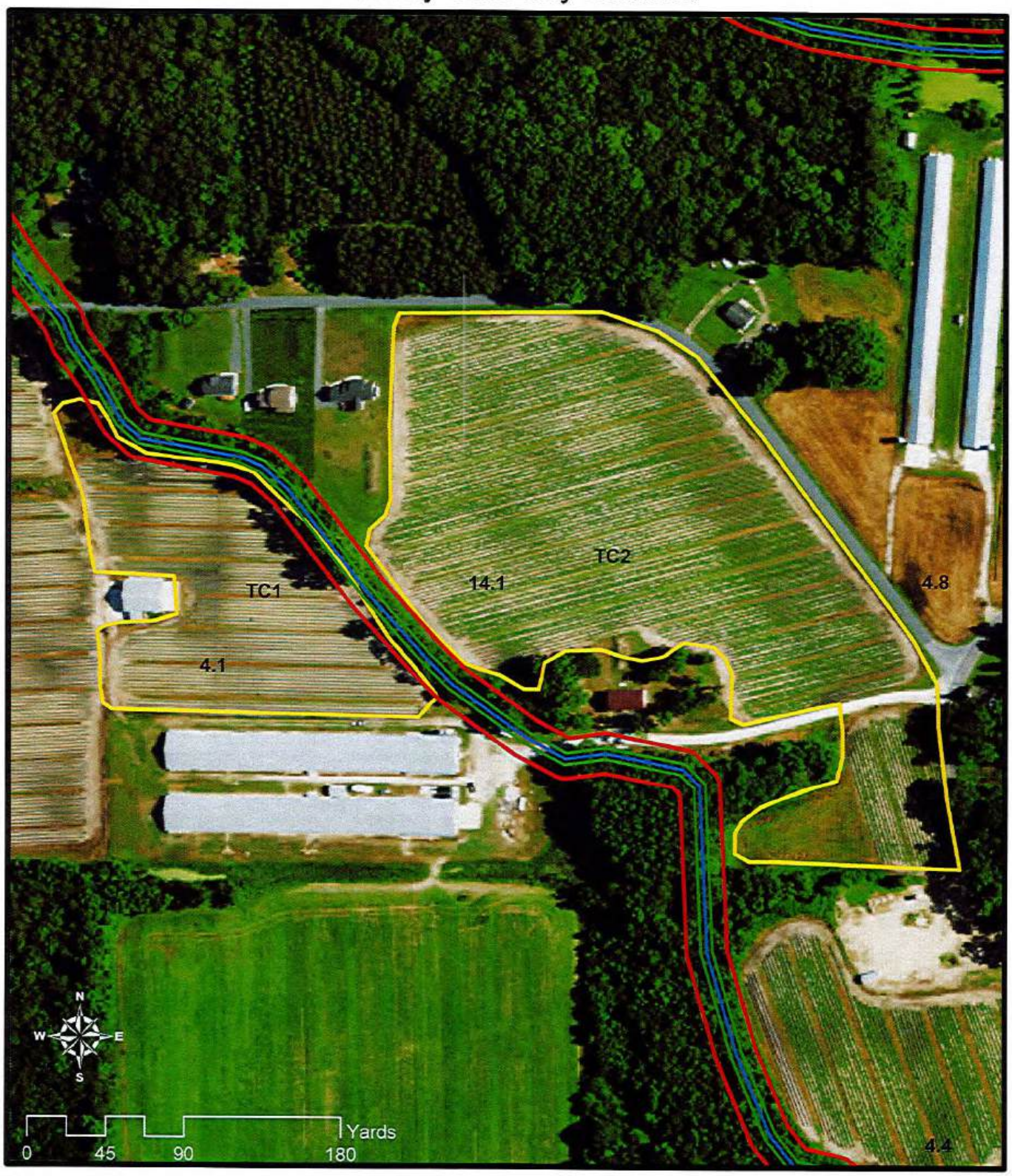
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Tommy Calloway Setback



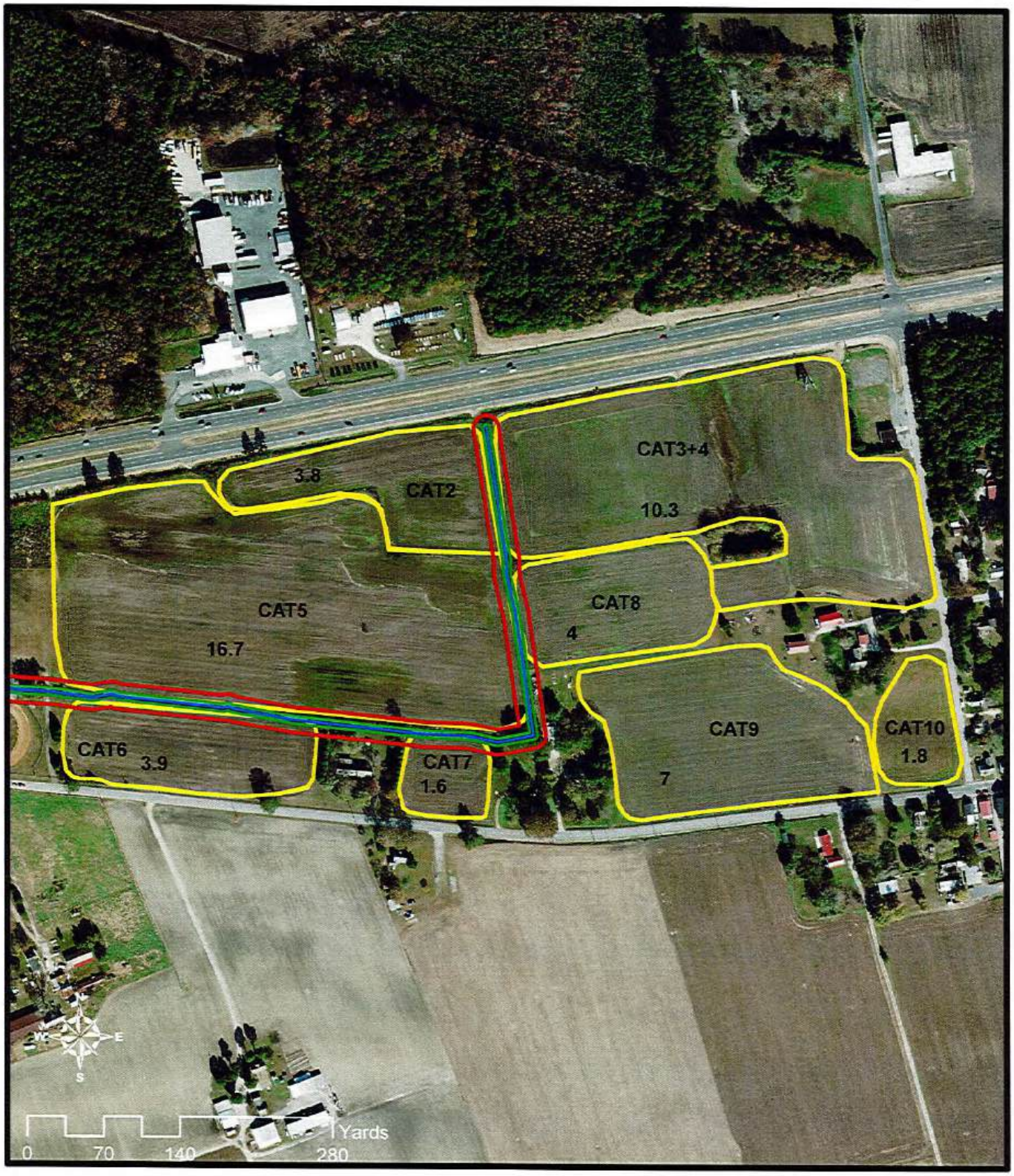
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Catlin Setback



1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Will Dyer, Phillips Home, Across from Home, & Tower Setback

3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Robert Eichelberger Setback

3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Terry Freed Setback

1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Hales Glasgow #3288-5797

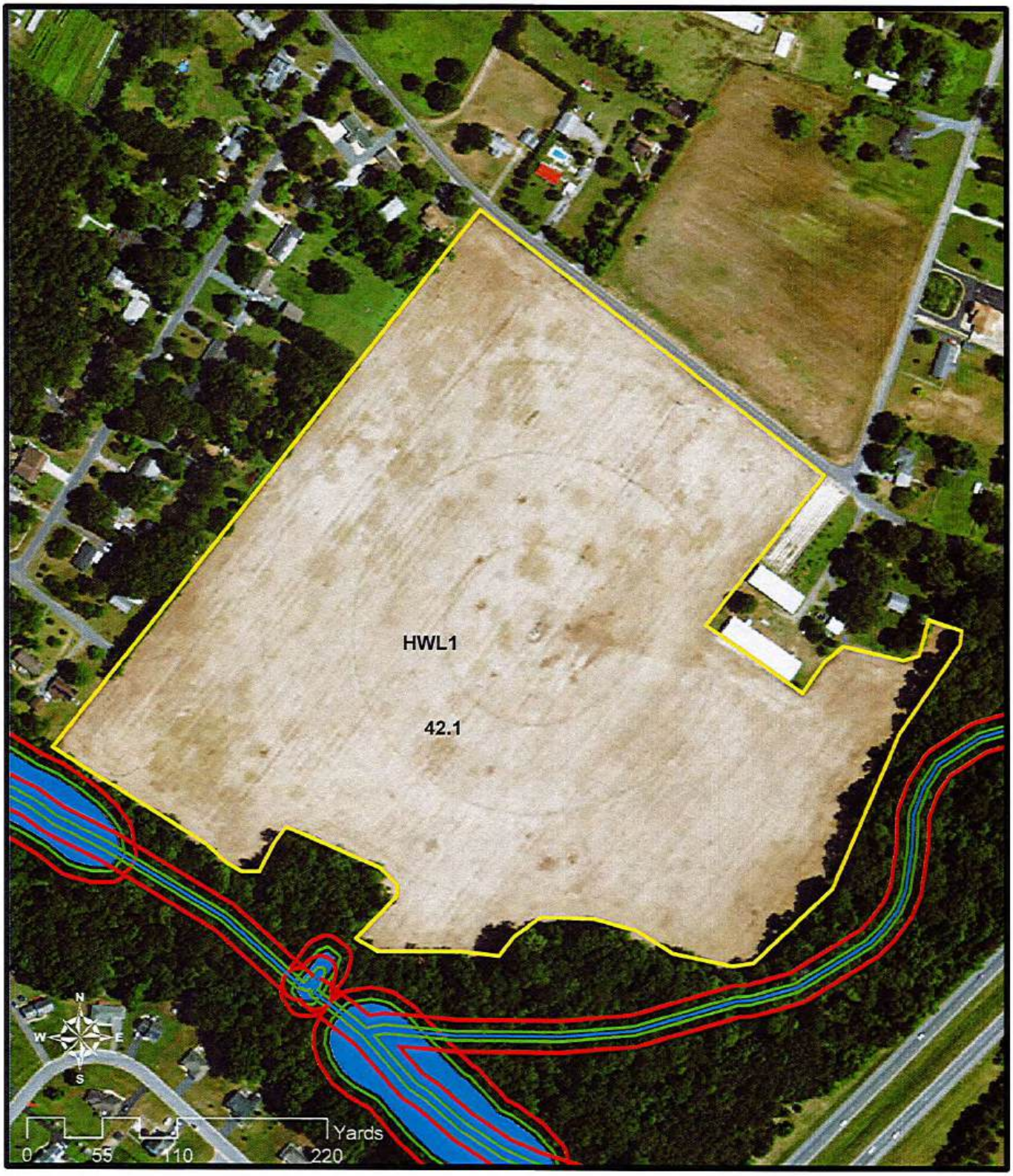
3/25

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Hales Luffman #756-1695



3/25

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Hales Phillips #2778-810

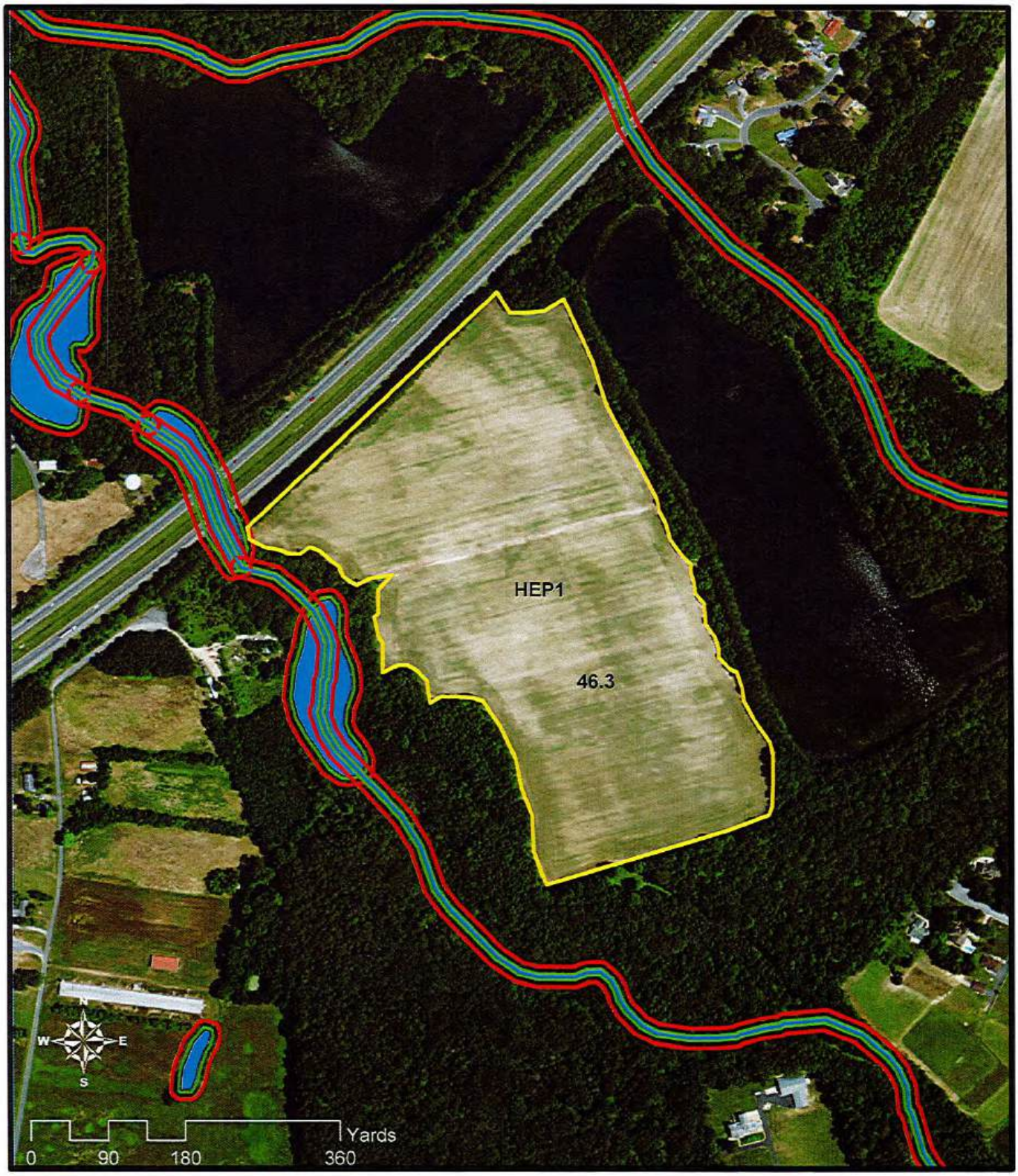
3/25

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Hales Elton Pusey #1626-930



3/25

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Hales Poly Walston #1610-473

3/25

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Pat Hochmuth, Bill Hochmuth Setback

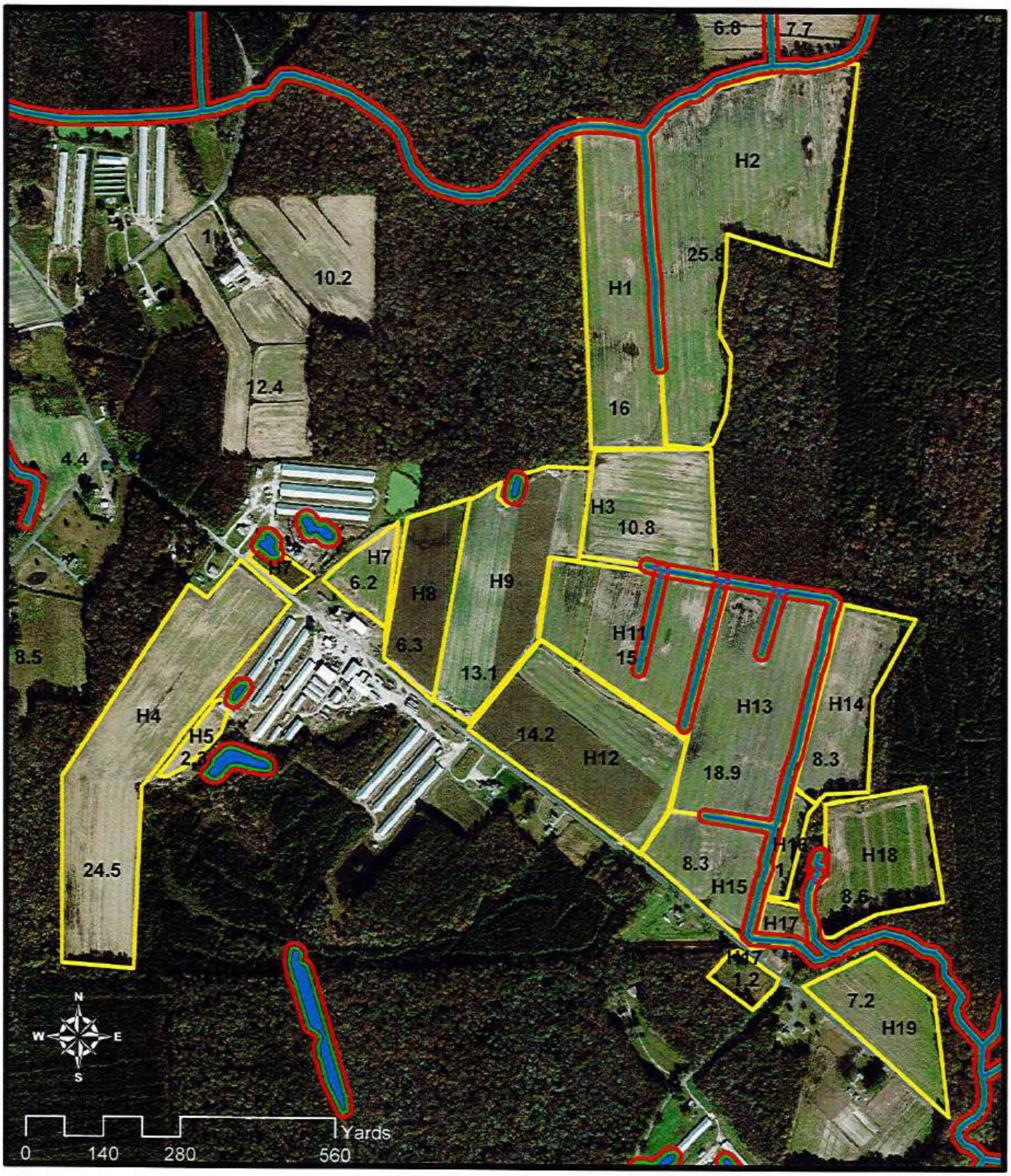
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Home Setback



1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Hunt Club Setback

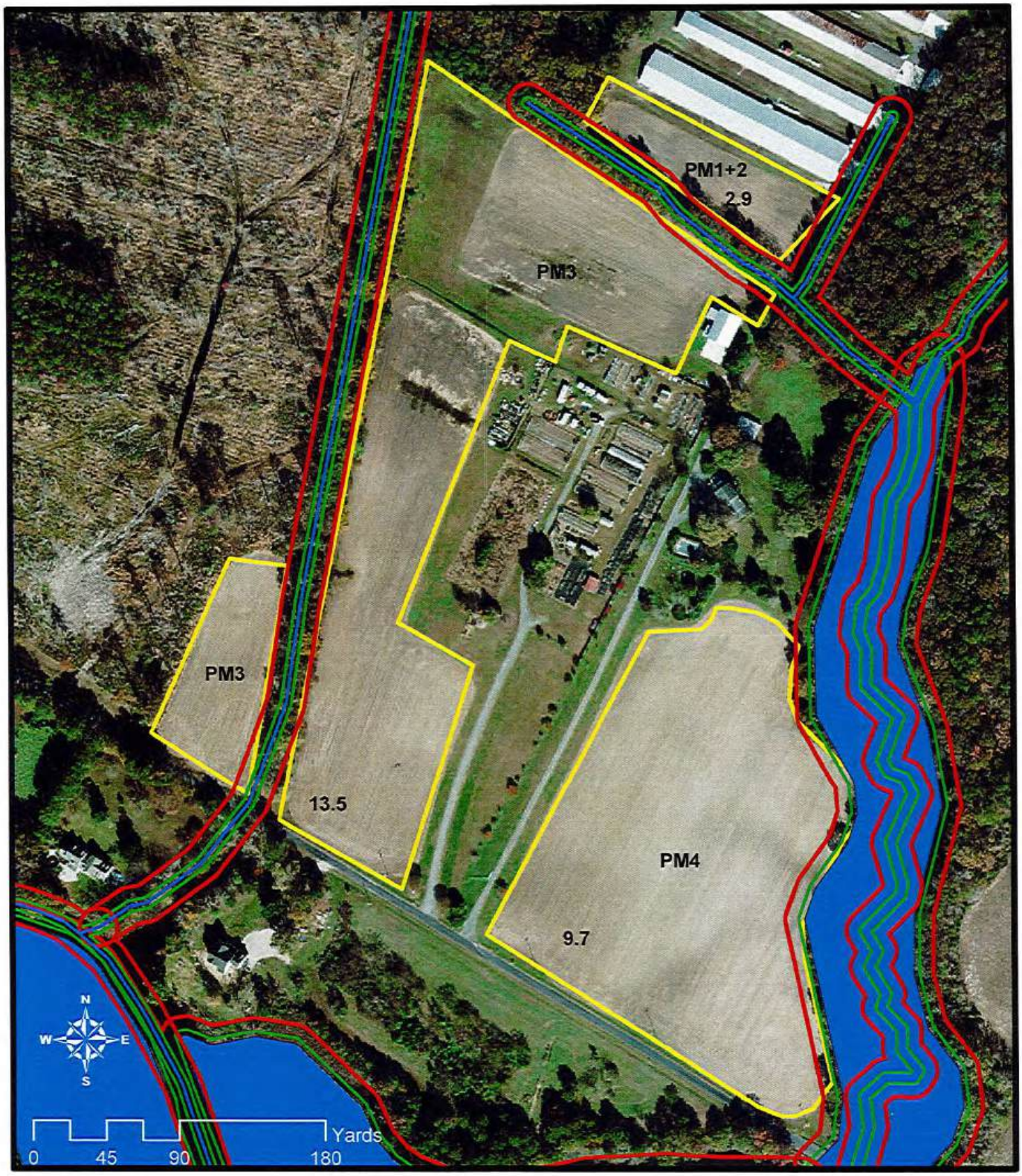
3/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Pat Moore Setback



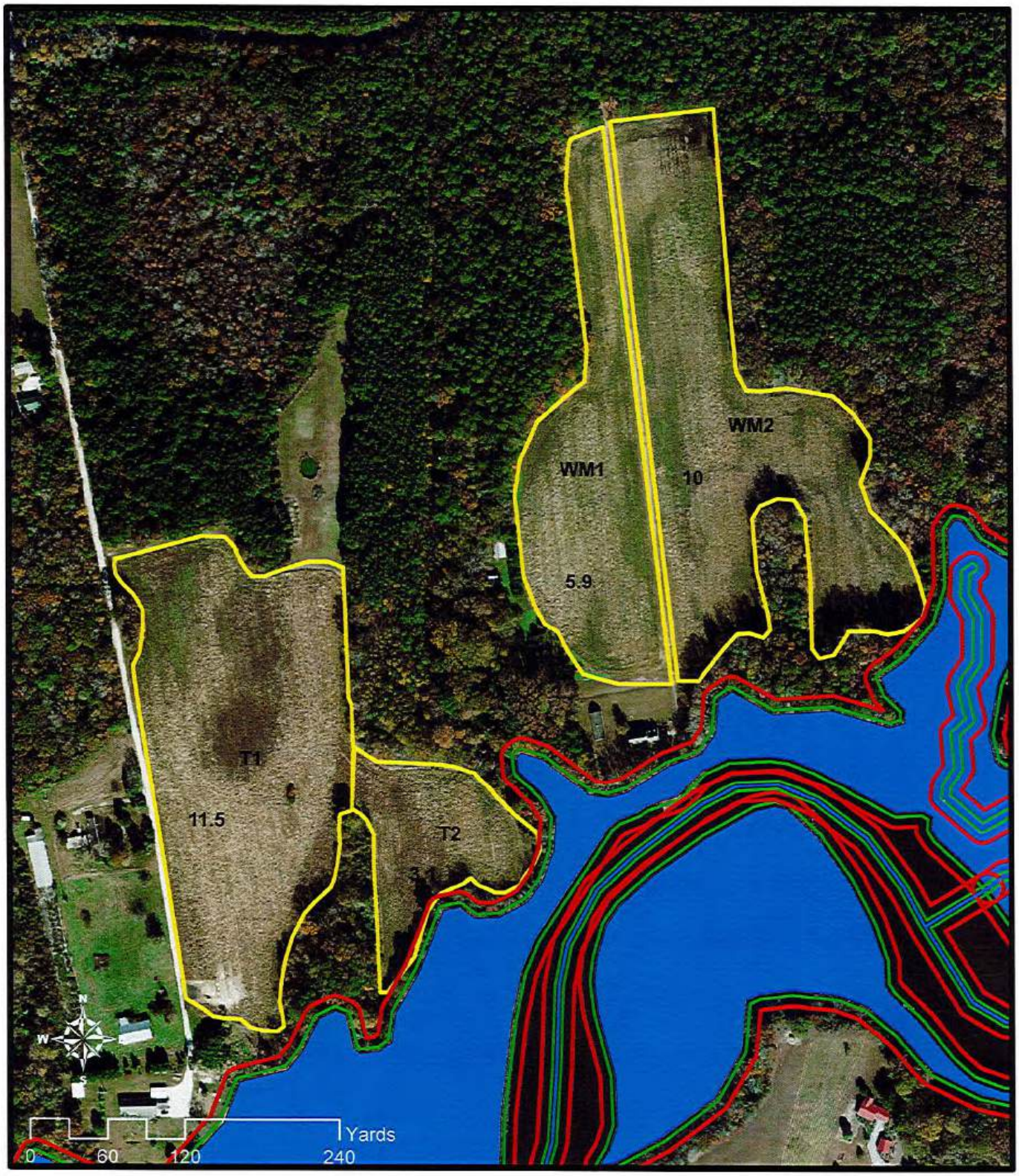
1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
William Morgan & Todd Setback



1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Frank Nashay

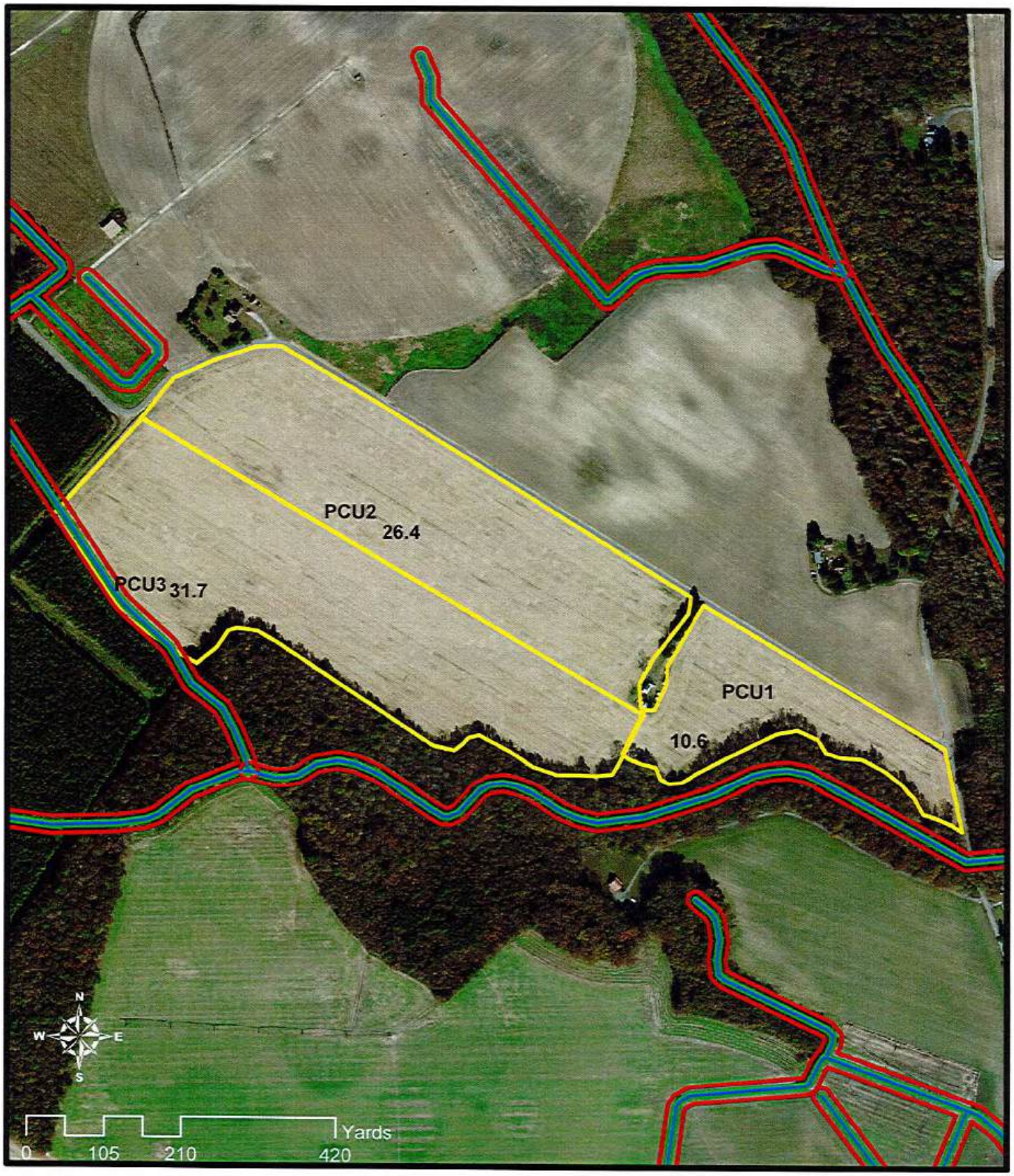
1/25

McConnell Agronomics

Legend

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Bill Palecheck 2579 Setback



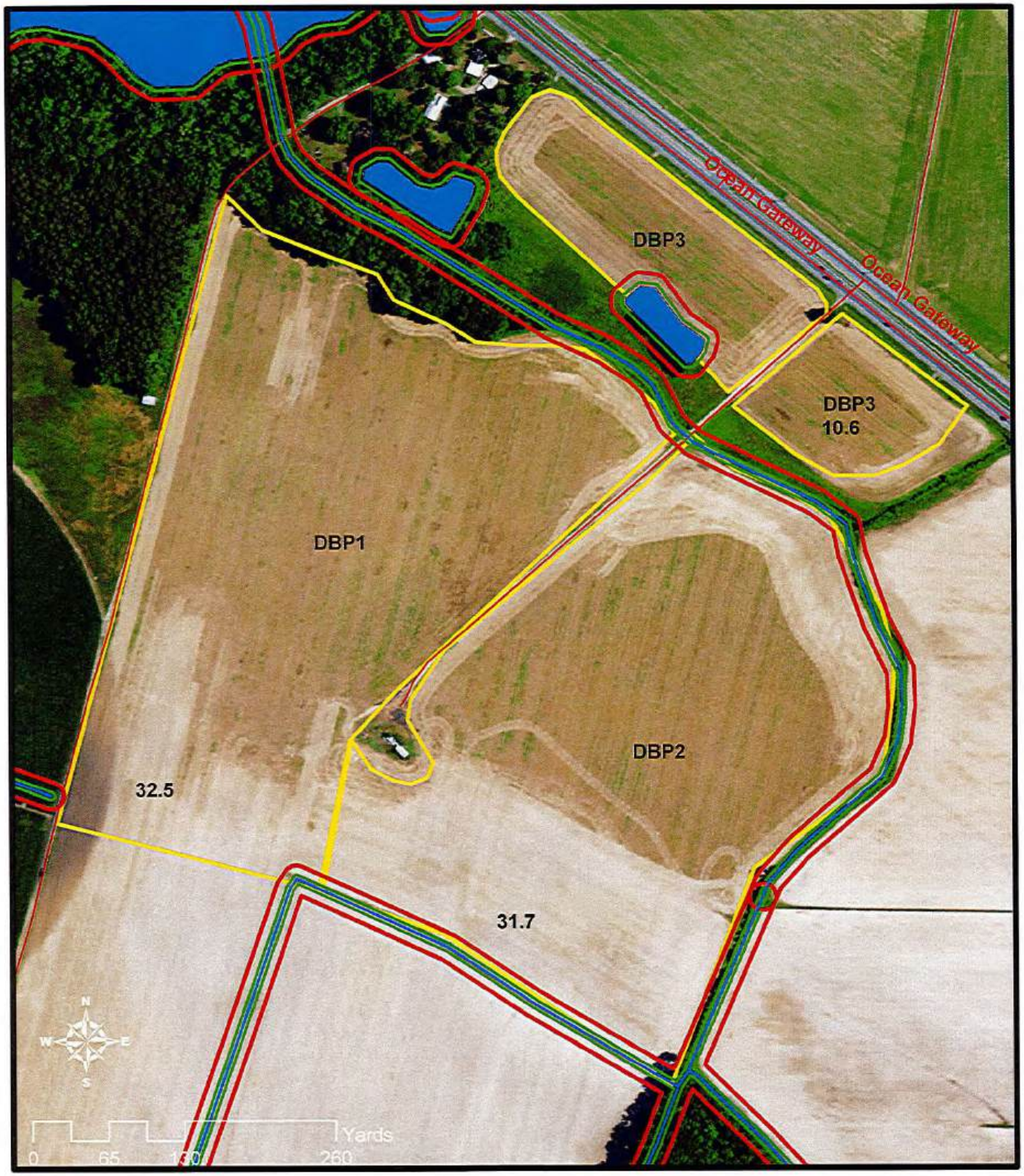
1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Bill Palechek 3227 Setback



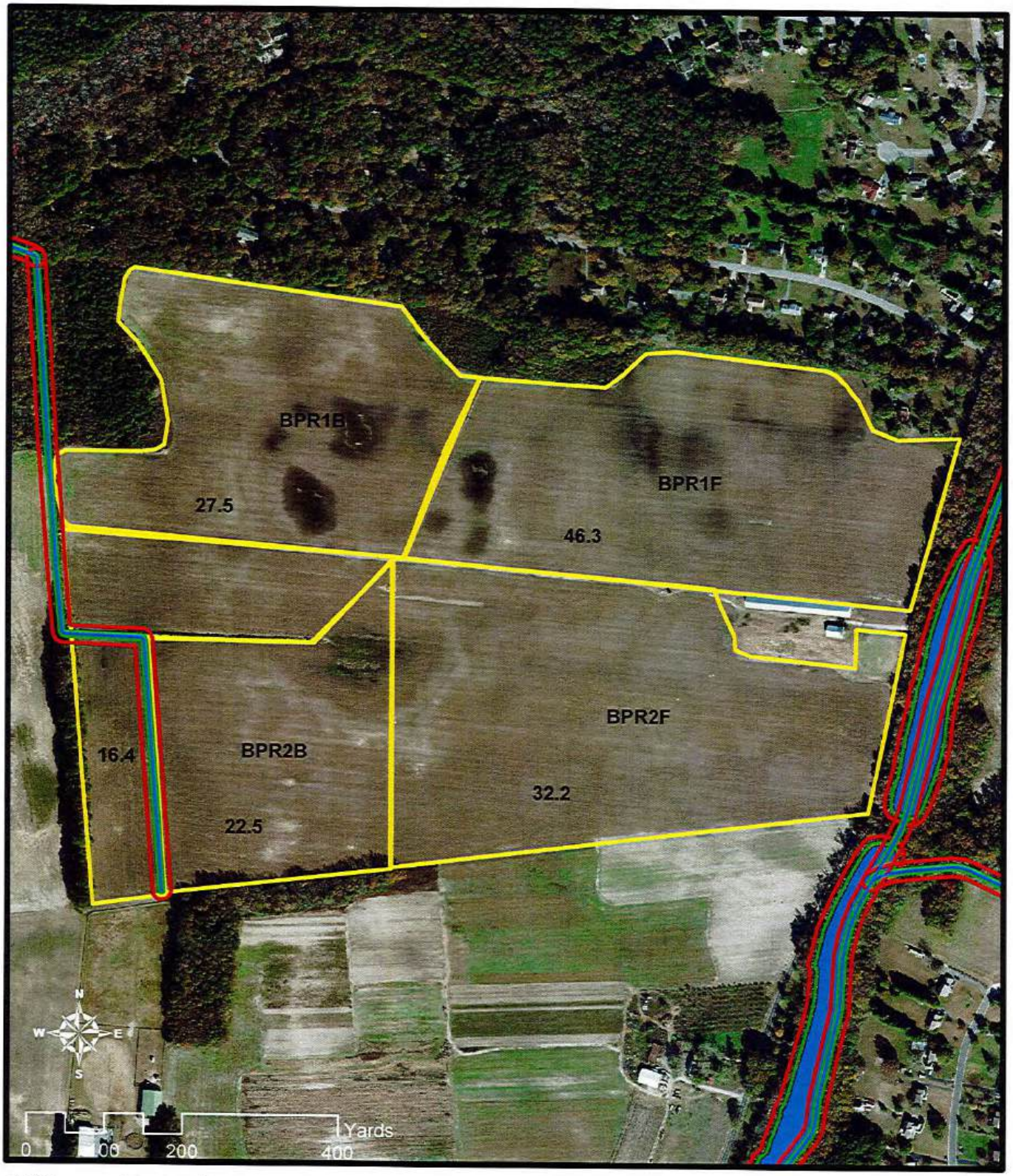
2/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
V Phillips Rockawalkin Setback



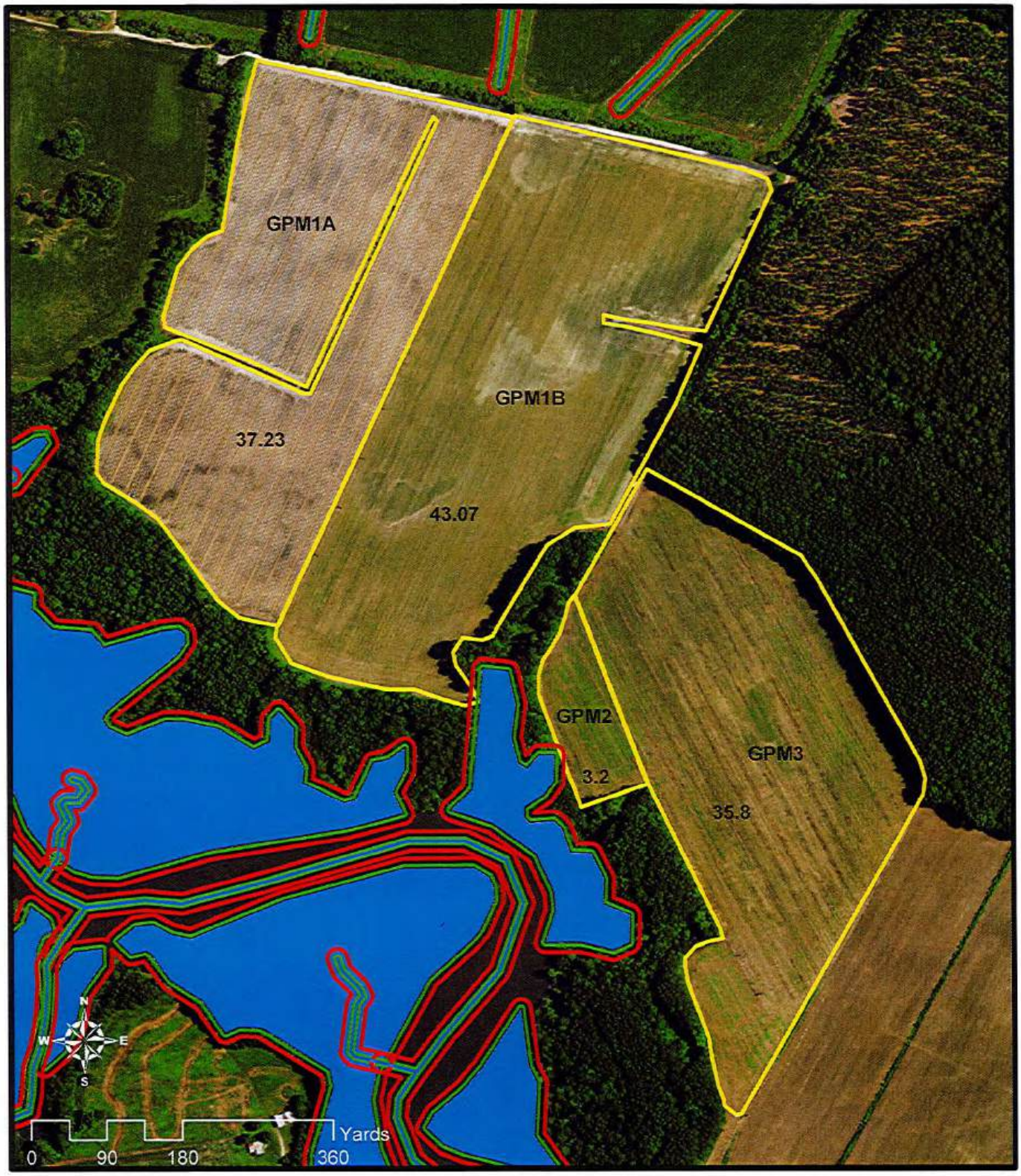
1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
George Phillips - Marks Nutters Neck



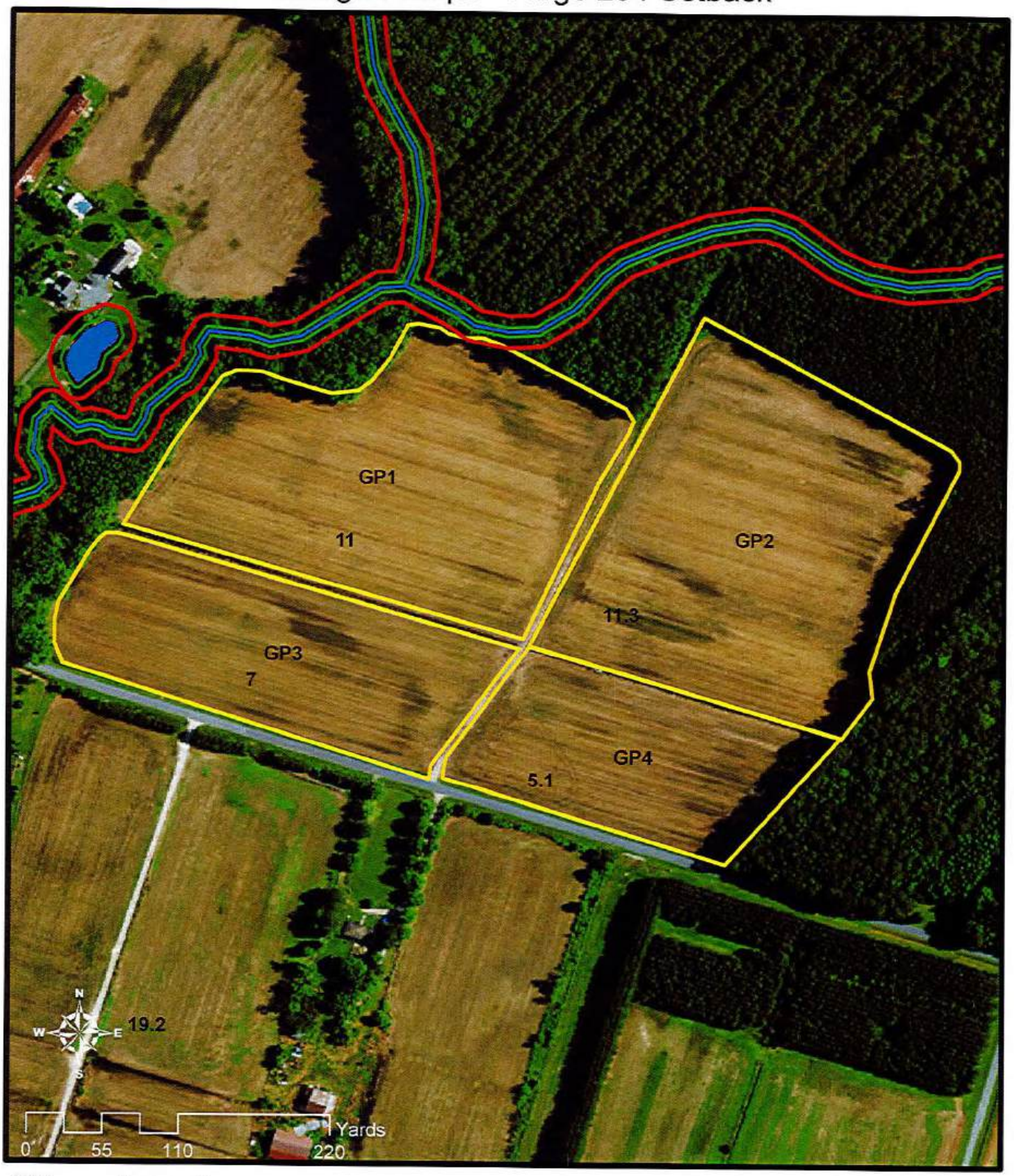
1/25

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
George Phillips - Paige 234 Setback



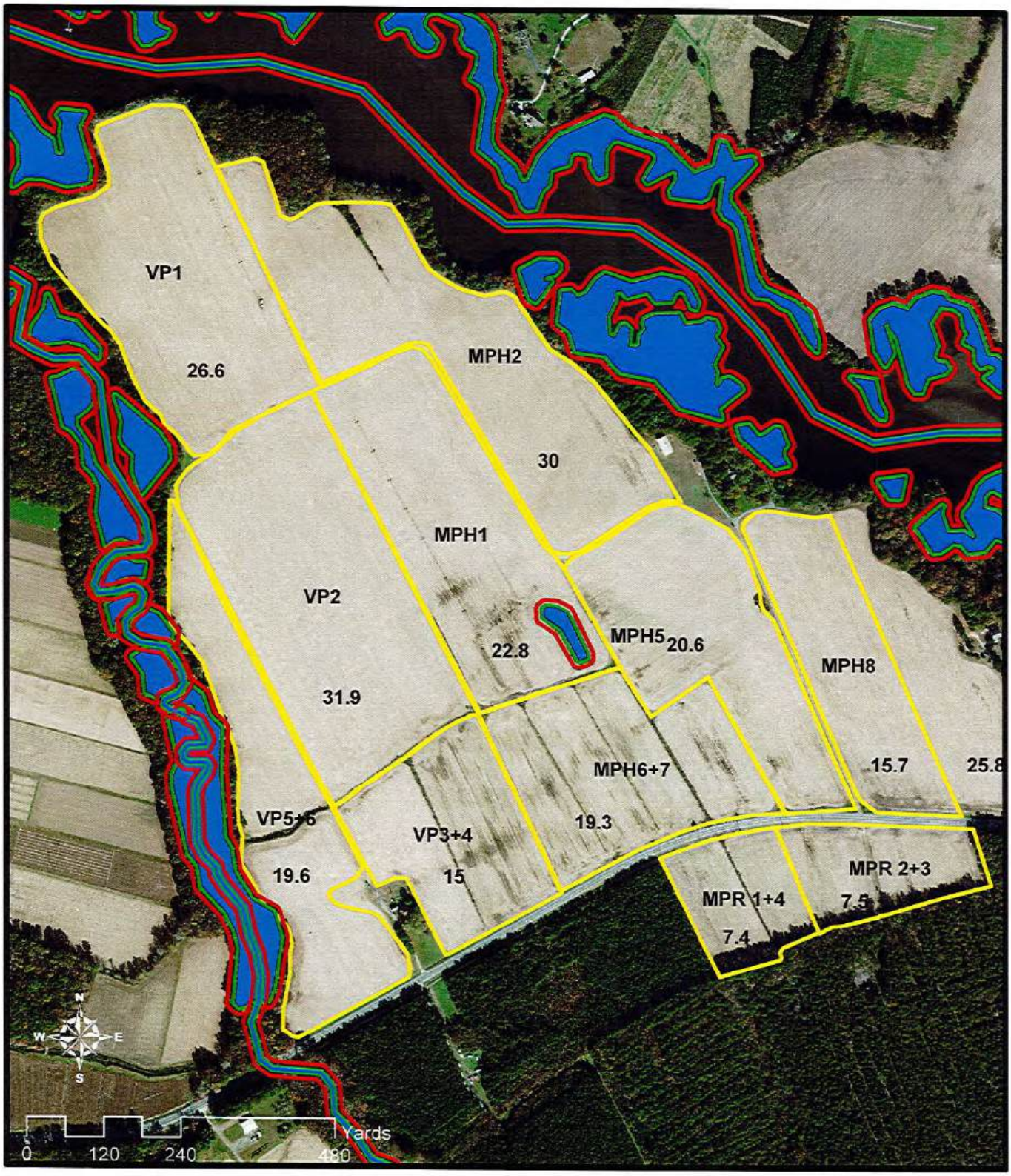
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Mike Phillips Home, Right & V Phillips Home Setback



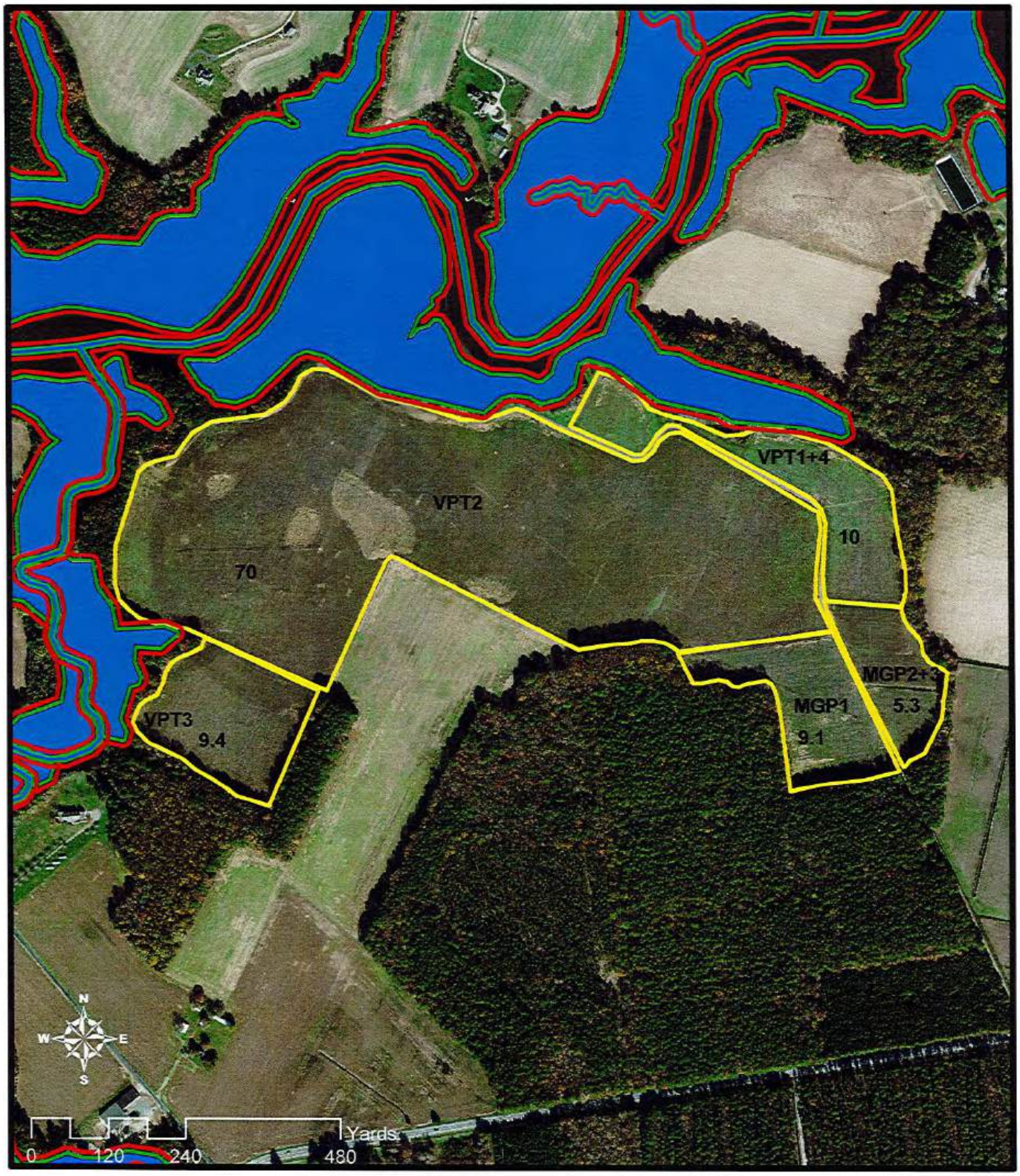
1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
V Phillips & MG Phillips Twilley Setback



1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Paige Pilchard Setback

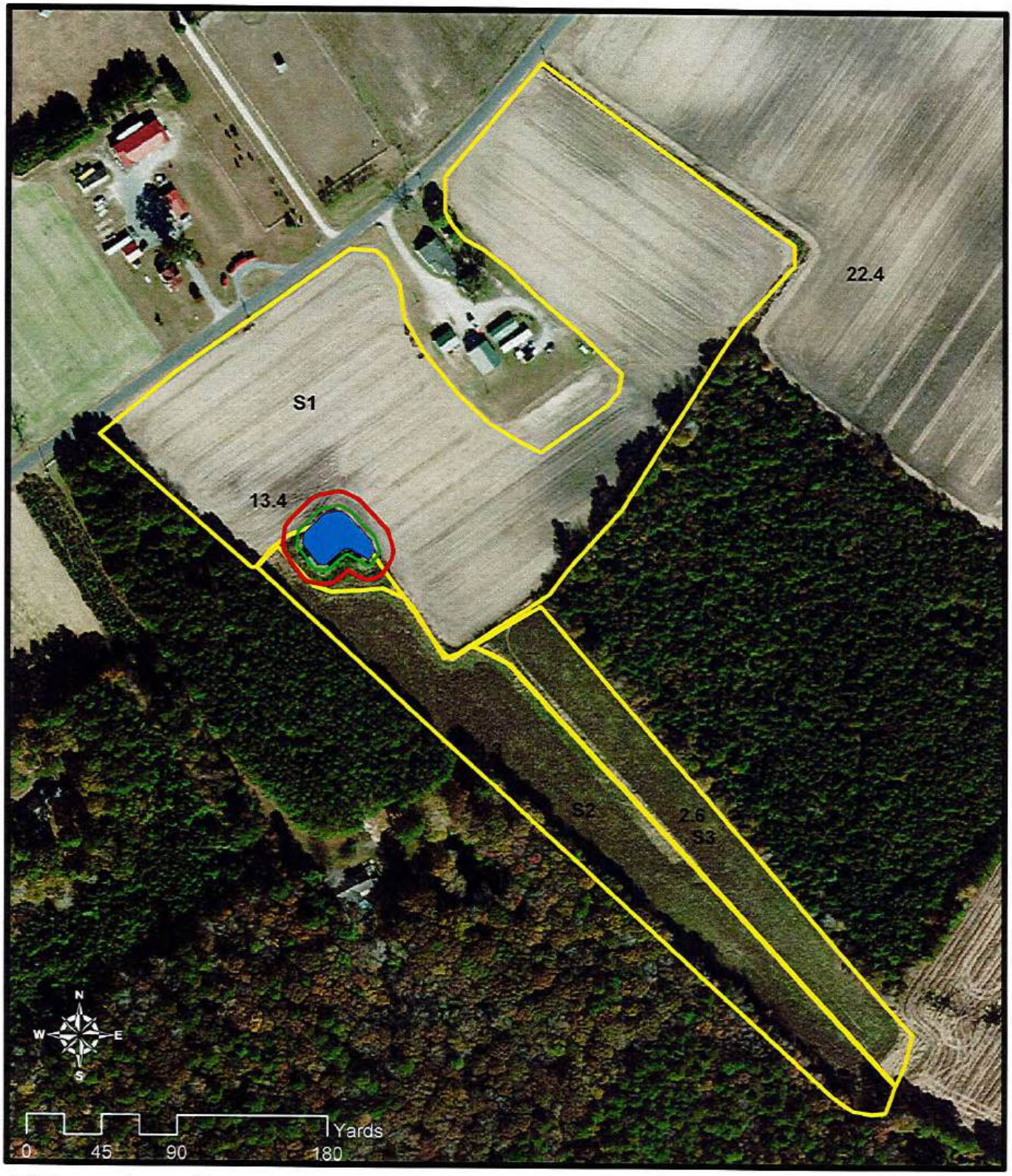
2/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Sandra Saulsbury Setback



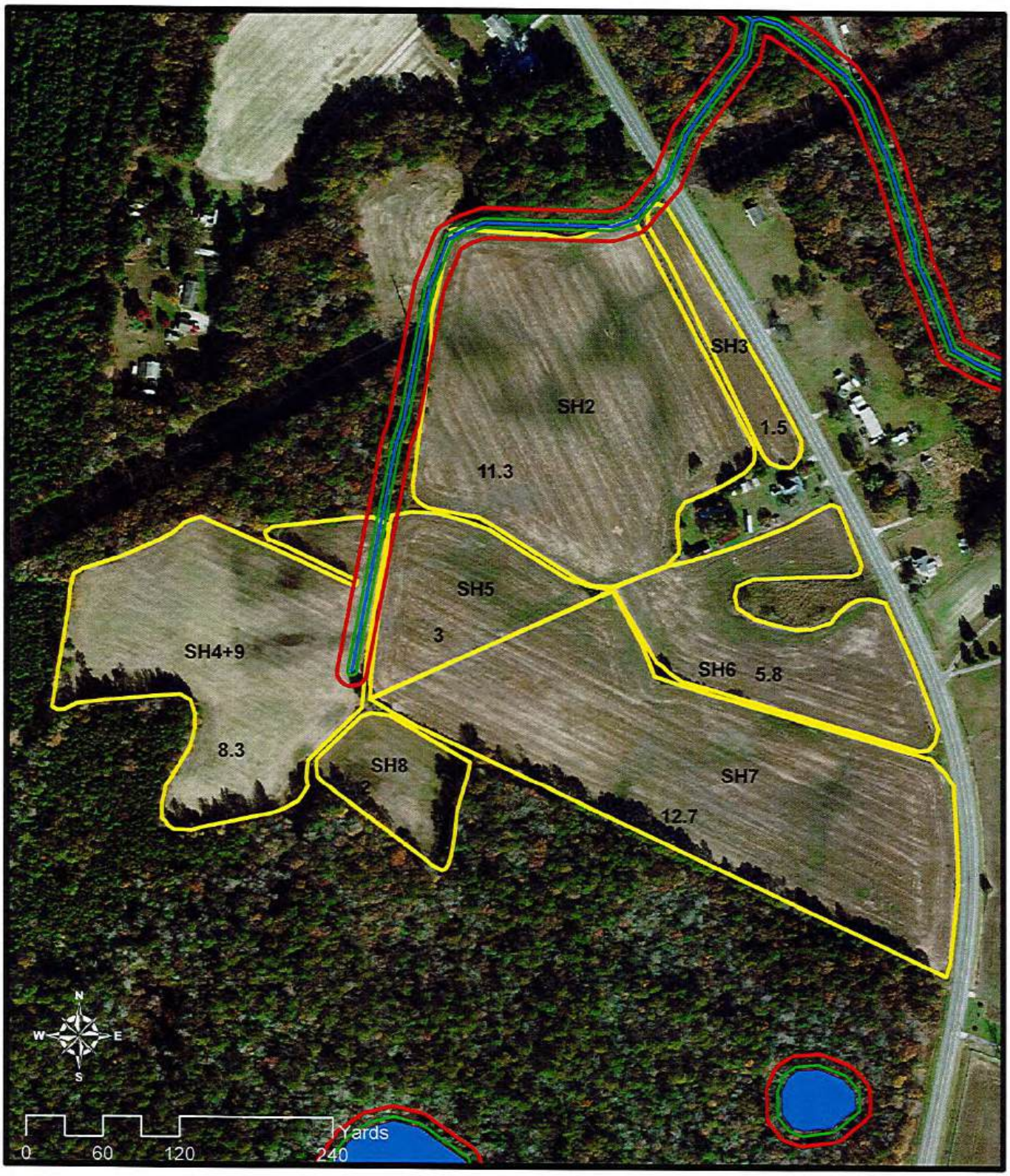
1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Shockley Setback



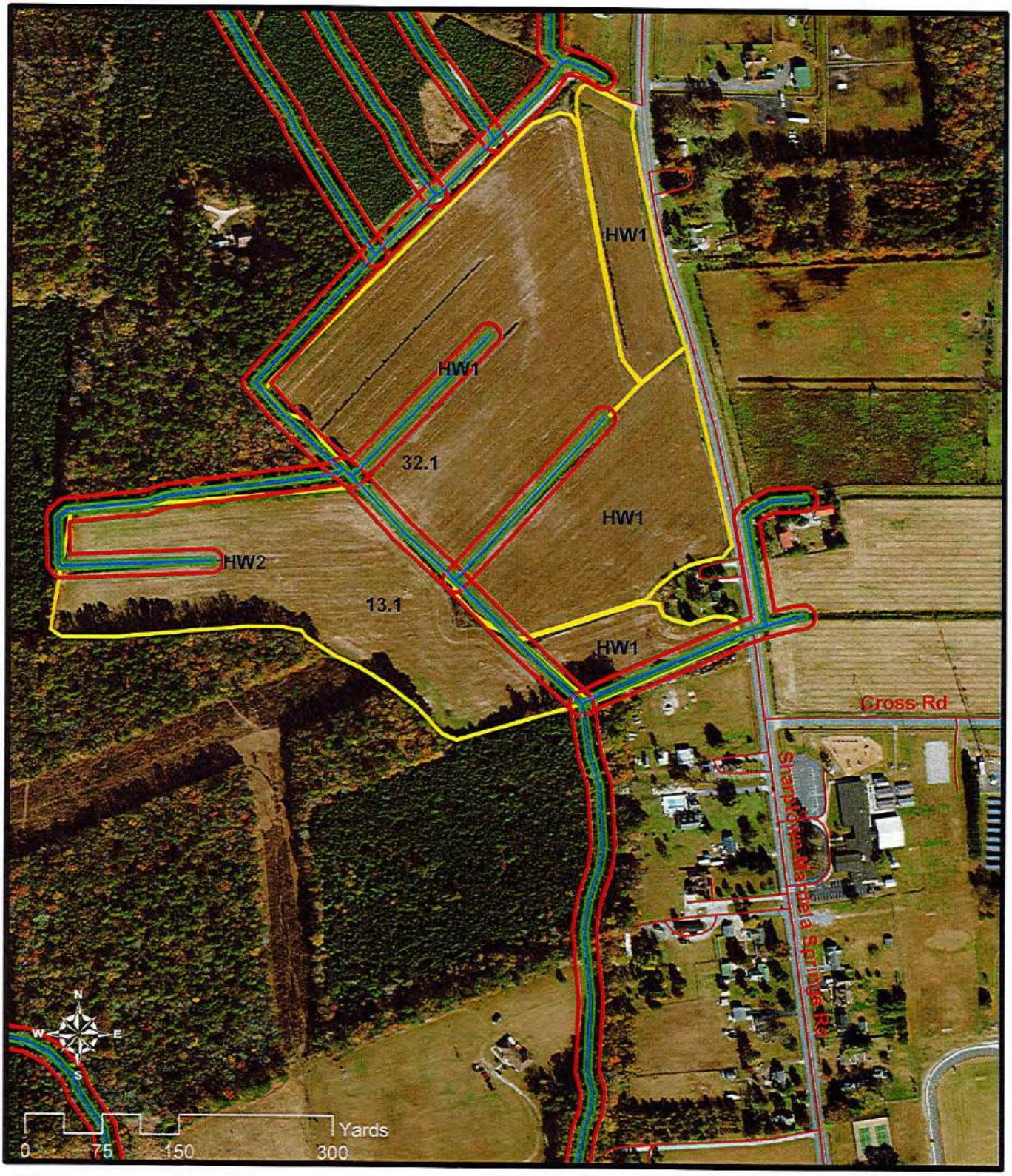
1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Henry Wang Setback



2/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Phillis Webster - Brad Setback

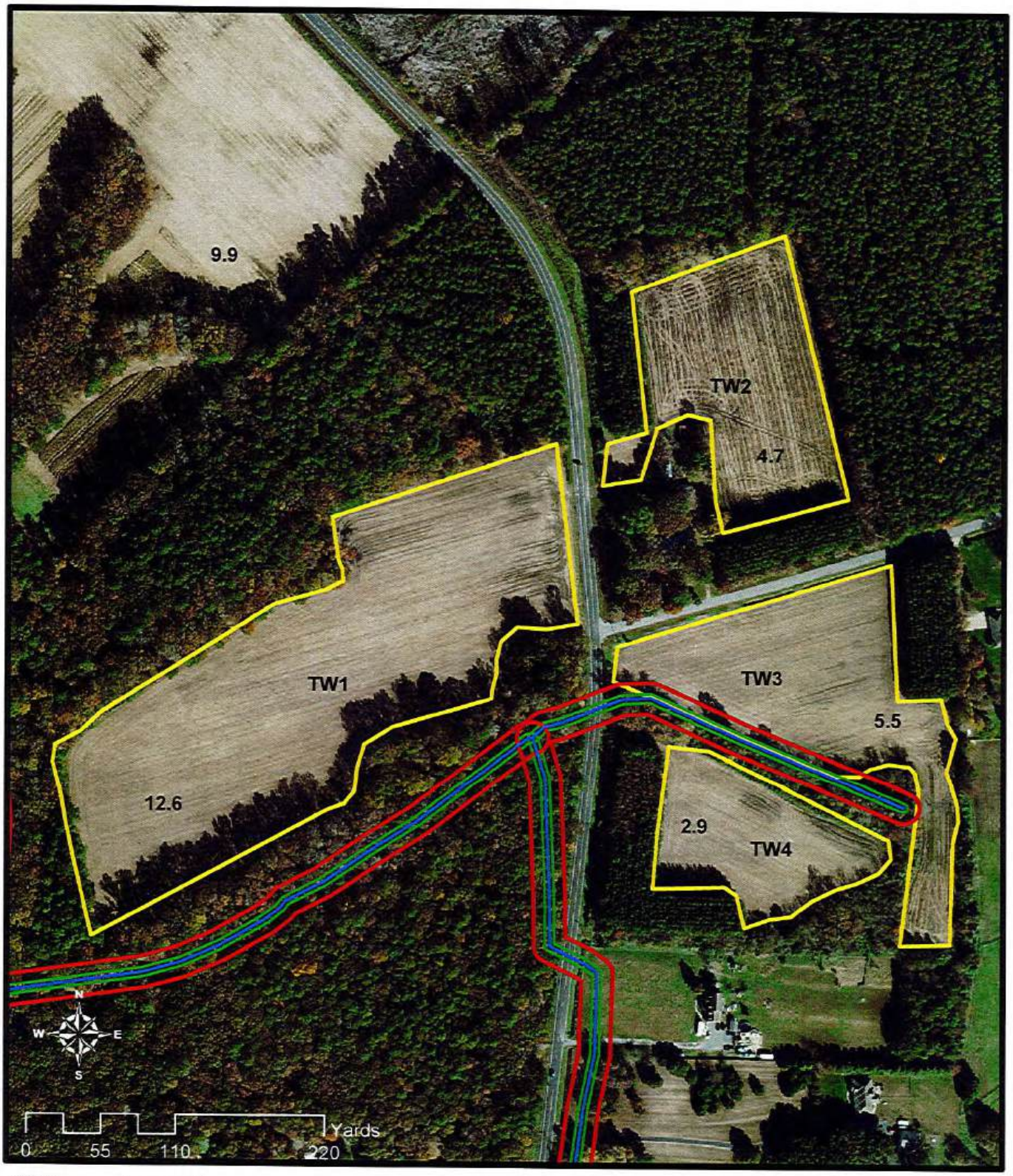
3/24

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Taylor White Setback



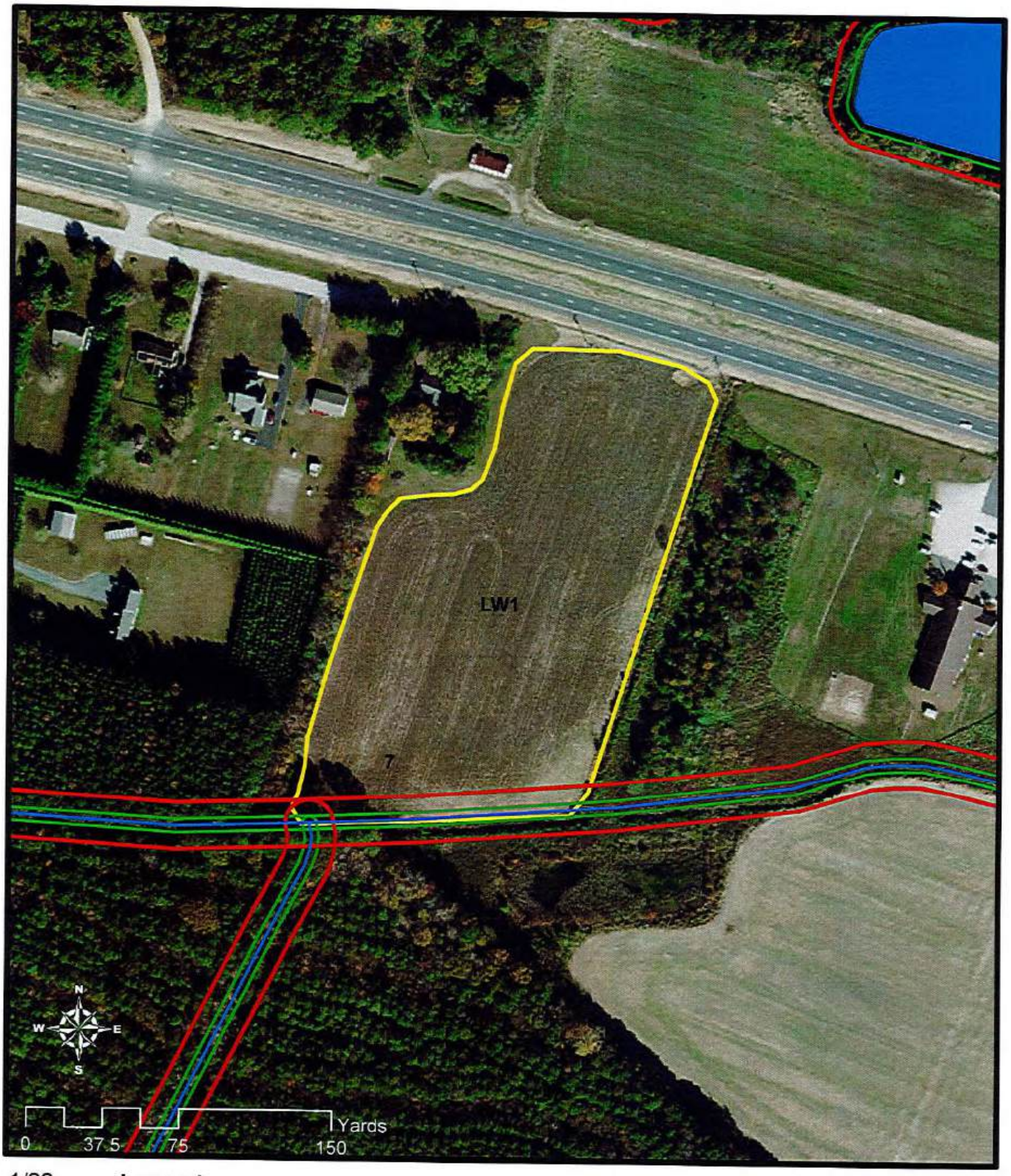
3/23

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Calloway Brothers
Stanford Wilson Setback



1/22

Legend

McConnell Agronomics

- Rivers Streams Ditches
- Stream Setback 35 Ft
- Stream Setback 10 Ft
- Lakes ponds Setback 35 Ft
- Lakes ponds Setback 10 Ft
- Rivers Lakes Ponds

Nutrient Application Setbacks

If the watercourse is:	It is defined as a:	For crop and pasture land adjacent to the watercourse, the setbacks requirements:
Natural and either perennial or intermittent	Stream	Apply
Channelized and perennial and; A. Lies within a floodplain soil map unit, or B. Lies within a hydric soil map unit "mapped as a narrow, elongated feature in a fluvial (stream-like)/floodplain position, or C. Lies within a "B" slope or greater soil D. And greater than 50% of field length	Stream (Water/ 365 days/yr.)	Apply
Ponds: with an outlet…		Apply
Channelized and intermittent	Ditch	Do Not Apply
Ponds: without an outlet…		Do Not Apply
Ephemeral (natural or channelized)	Ditch	Do Not Apply

Nutrient Application Setbacks

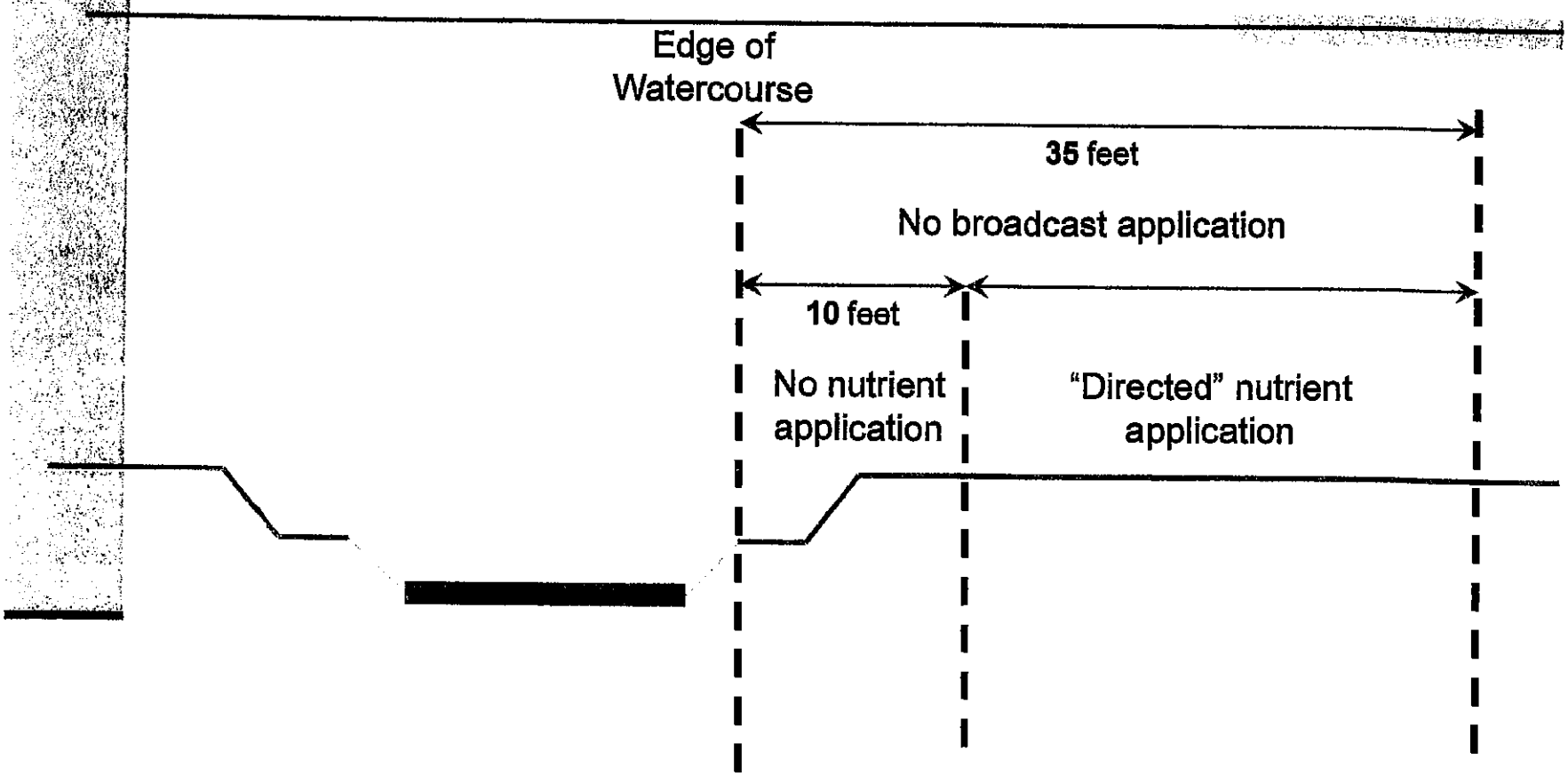
- What is a stream vs. a ditch?

- Stream
  - Naturally occurring
  - Generally sinuous or winding
  - Generally accompanied by certain biotic and vegetative species
- Ditch
  - Man made
  - Generally straight lines

Nutrient Application Setbacks

- Definitions
  - Perennial
    - Contains water all the time (365 days of the yr.)
    - Influenced primarily by groundwater flow
  - Intermittent
    - Contains water or flows seasonally
    - Influenced by both groundwater & surface runoff
  - Ephemeral
    - Contains water or flows only as a result of precipitation events

Nutrient Application Setbacks



Nutrient Application Setbacks

- Broadcast applications
  - Spinner spreader
  - High volume horizontal nozzle
- Directed applications
  - Vertical fan nozzles
  - Knifed/injected applications
  - Drop nozzles
  - Planter-applied fertilizers

Nutrient Application Setbacks

Setbacks for Nutrient Application cont:
Effective January 1, 2014

- Broadcast method *(e.g.,* spinners, splashers) either with or without incorporation requires a **35' surface water setback**

- Directed spray application or injection of crop nutrients requires a **I0' surface water setback**

- Excepting perennial forage crops grown for hay or pasture, vegetation in the I0-foot setback area may not include plants that would be considered part of the crop grown in the field.

- Pastures and hayfields are subject to a **I0-foot** nutrient application setback.

Nutrient Application Setbacks

Application setback alternative:

- MDA may approve other BMP's including:
  - USDA or NRCS practice standards
  - UM or other land grant university research & demonstration establishing the effectiveness of those practices
- Livestock shall be excluded from the 10' setback to prevent direct deposition of nutrients within the setback, excepting BMP's under SCWQ plan
- Sacrifice lots (less than 75% grass or grass legume mix) shall maintain a 35-foot set back.

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Adkins Historical #3787-6115									
ADH1	--	--	--	5.6	1.0	High Magnesium	--	--	--
ADH2	--	--	--	5.7	1.0	High Magnesium	--	--	--
Adkins, Earnest #3705-6051									
EA2	--	--	--	--	--	--	5.2	1.3	High Magnesium
Adkins, Jimmy #311-1210									
JA1	5.9	--	--	--	--	--	--	--	--
Ashcroft, Steve #153-1036									
AO1	--	--	--	6.1	--	--	5.3	1.3	High Magnesium
AO2	--	--	--	5.4	1.0	High Magnesium	--	--	--
Ashton, Alfred #147-1030									
AA1	5.1	1.5	High Magnesium	--	--	--	--	--	--
AA2	5.4	1	High Magnesium	--	--	--	--	--	--
AA3	4.9	1.5	High Magnesium	--	--	--	--	--	--
AA4	5.4	1.5	High Magnesium	--	--	--	--	--	--
AA5	5.2	1.5	High Magnesium	--	--	--	--	--	--
Beazer East #1482-306									
BE1A	6.6	--	--	--	--	--	--	--	--
BE1B	6.6	--	--	--	--	--	--	--	--
BE3	6.4	--	--	--	--	--	--	--	--
BE4	7.0	--	--	--	--	--	--	--	--
BE5	6.3	--	--	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Burnett, King #3039-5746									
KB4	5.8	1.0	High Magnesium	--	--	--	--	--	--
KB6	5.1	1.5	High Magnesium	--	--	--	--	--	--
KB10	5.4	1.25	High Magnesium	--	--	--	--	--	--
Calloway, Tommy #2152-1020									
TC1	--	--	--	6.9	--	--	--	--	--
TC2	--	--	--	6.8	--	--	--	--	--
Catlin #209-1098									
CAT2	5.5	1.25	High Magnesium	--	--	--	--	--	--
CAT3+4	5.5	1.25	High Magnesium	--	--	--	--	--	--
CAT5	5.9	--	--	--	--	--	--	--	--
CAT6	5.5	1.25	High Magnesium	--	--	--	--	--	--
CAT7	5.5	1.25	High Magnesium	--	--	--	--	--	--
CAT8	5.7	1.0	High Magnesium	--	--	--	--	--	--
CAT9	6.0	--	--	--	--	--	--	--	--
CAT10	5.7	1.0	High Magnesium	--	--	--	--	--	--
Dietz, Leonard #3785-6113									
LD1	5.1	1.5	High Magnesium	--	--	--	--	--	--
Dyer, Will #4041-6466									
WD1A	5.7	1.0	High Magnesium	--	--	--	--	--	--
WD1B	5.7	1.0	High Magnesium	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Edwards, John #3789-6117									
JE3	5.5	1.25	High Magnesium	6.0	--	--	--	--	--
JE5	5.5	1.25	High Magnesium	5.2	1.25	High Calcium*	--	--	--
JE6	5.8	1.0	High Magnesium	5.9	0.75	High Magnesium*	--	--	--
JE7+8	5.8	1.0	High Magnesium	5.5	1.0	High Magnesium*	--	--	--
Eichelberger, Robert #1535-394									
RE1	6.4	--	--	--	--	--	--	--	--
RE2	6.8	--	--	--	--	--	--	--	--
Freed, Terry #241-2871									
GE1	--	--	--	5.8	1.0	High Magnesium	--	--	--
Glasgow, Elizabeth #1577-450									
EG1	6.5	--	--	--	--	--	6.4	--	--
Hales Collins #3217-6119									
HBC1	--	--	--	--	--	--	5.4	1.0	High Magnesium
HBC2	--	--	--	--	--	--	5.4	1.0	High Magnesium
Hales Glasgow #3288-5797									
HG1	--	--	--	--	--	--	7.1	--	--
Hales Hotten #868-1797									
HH1	--	--	--	--	--	--	5.6	1.0	High Magnesium
Hales Jenkins Terrapin #3214-1879									
HJT1	--	--	--	--	--	--	5.6	1.5	High Magnesium
HJT2	--	--	--	--	--	--	5.4	1.5	High Magnesium

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Hales Jenkins Warwick #3214-1878									
HJ1	--	--	--	--	--	--	5.7	1.0	High Magnesium
HJ2	--	--	--	--	--	--	5.9	--	--
Hales Luffman #756-1695									
HWL1	--	--	--	--	--	--	6.2	--	--
Hales Packing Shed (House) #1624-485									
HPS1	--	--	--	6.4	--	--	--	--	--
HPS2	--	--	--	7.3	--	--	--	--	--
Hales Packing Shed (Left) #3216-1662									
HPL	--	--	--	6.3	--	--	--	--	--
Hales Packing Shed (Right) #3216-1661									
HPR	--	--	--	6.9	--	--	--	--	--
Hales Phillips, B. #2778-810									
HP1	--	--	--	--	--	--	4.4	1.5	High Magnesium
Hales Pusey, Elton #1626-930									
HEP1	--	--	--	--	--	--	6.0	--	--
Hales Tom Hall #1995-5094									
HTH1	--	--	--	--	--	--	5.4	1.0	High Magnesium
Hales MaloneAG #4007-6312 + #4174-6498									
HM1	--	--	--	--	--	--	5.9	--	--
HM2	--	--	--	--	--	--	6.4	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Hales Walmart #728-1554									
HWM1	--	--	--	--	--	--	6.3	--	--
HWM2	--	--	--	--	--	--	5.6	1.0	High Magnesium
Hales Poly Walston #1610-473									
HPW1	--	--	--	--	--	--	6.6	--	--
Hatton, Faye #229-1118									
FH1	4.9	1.5	High Magnesium	--	--	--	--	--	--
FH2	5.3	1.25	High Magnesium	--	--	--	--	--	--
Hensley, B. #1481-305									
HN1	5.9	--	--	--	--	--	--	--	--
HN2	6.3	--	--	--	--	--	--	--	--
HN3	6.3	--	--	--	--	--	--	--	--
Hochmuth, Bill #3138-5757									
BH1	6.8	--	--	--	--	--	--	--	--
BH2	6.7	--	--	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Hochmuth, Pat #3139-5758									
PH1	--	--	--	4.7	1.5	High Magnesium	--	--	--
PH2	--	--	--	5.0	1.5	High Calcium	5.4	1.0	High Magnesium
PH3	--	--	--	6.0	--	--	5.5	1.0	High Magnesium
PH4	--	--	--	5.3	1.25	High Calcium	--	--	--
PH5A	5.4	1.25	High Magnesium	--	--	--	--	--	--
PH5B	5.4	1.25	High Magnesium	--	--	--	--	--	--
PH6	--	--	--	--	--	--	not rented, 4 year rotation		
Home #3527-395									
H1	6.1	--	--	--	--	--	--	--	--
H2	6.3	--	--	--	--	--	--	--	--
H3	5.7	1.0	High Magnesium	--	--	--	--	--	--
H4	6.2	--	--	--	--	--	--	--	--
H5	6.1	--	--	--	--	--	--	--	--
H7	5.5	1.0	High Magnesium	--	--	--	--	--	--
H8	6.4	--	--	--	--	--	--	--	--
H9	6.0	--	--	5.6	1.0	High Magnesium	--	--	--
H11	5.7	1.0	High Magnesium	5.7	1.0	High Calcium	6.1	--	--
H12	6.4	--	--	--	--	--	--	--	--
H13	6.1	--	--	--	--	--	6.6	--	--
H14	5.8	1.0	High Magnesium	--	--	--	--	--	--
H15	5.6	1.0	High Magnesium	--	--	--	--	--	--
H16	6.1	--	--	--	--	--	--	--	--
H17	6.7	--	--	--	--	--	--	--	--
H18	5.2	1.5	High Magnesium	--	--	--	--	--	--
H19	6.7	--	--	--	--	--	6.2	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Home, Bobby & Mary #3596-1023+1024									
B1	--	--	--	7.3	--	--	6.5	--	--
B2	--	--	--	7.0	--	--	--	--	--
Home, Doug's #3527-5167									
HD2	--	--	--	5.3	1.0	High Magnesium	--	--	--
HD5	--	--	--	5.9	0.75	High Magnesium	--	--	--
HD6	--	--	--	5.1	1.5	High Magnesium	--	--	--
Home, Hunt Club #2263-1085									
HC1	7.1	--	--	7.3	--	--	6.4	--	--
HC2	6.9	--	--	6.3	--	--	--	--	--
Home, Lloyd #3527-2339									
HL1	--	--	--	6.9	--	--	6.3	--	--
Home, Nan's #3527-1119									
N1	5.8	1.0	High Magnesium	--	--	--	--	--	--
N2	6.6	--	--	--	--	--	--	--	--
N3	5.6	1.0	High Magnesium	--	--	--	--	--	--
N4	5.8	1.0	High Magnesium	--	--	--	--	--	--
Home, Tank #3527-1022									
HT1	5.9	--	--	7.3	--	--	--	--	--
HT2	5.8	1.0	High Magnesium	6.8	--	--	--	--	--
HT3	6.0	--	--	5.6	1.0	High Magnesium	6.0	--	--
HT4	5.9	--	--	6.2	--	--	6.7	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Johnson-Upper Ferry #1484-308									
J1	--	--	--	5.8	1.0	High Magnesium	--	--	--
J2	--	--	--	6.3	--	--	--	--	--
Kenny, David #1463-6332									
DK1	5.3	1.25	High Magnesium	--	--	--	--	--	--
Moore, Pat #256-1145									
PM1+2	--	--	--	--	--	--	--	--	--
PM3	5.4	1.25	High Magnesium	--	--	--	--	--	--
PM4	5.2	1.5	High Magnesium	--	--	--	--	--	--
Morgan, William #244-1133									
WM1	5.7	1.0	High Magnesium	--	--	--	--	--	--
WM2	5.8	1.0	High Magnesium	--	--	--	--	--	--
Nashay, Frank #257-1146+#3041-5748									
FN1	5.2	1.5	High Magnesium	--	--	--	5.4	1.0	High Magnesium
FN2	5.0	1.5	High Magnesium	--	--	--	--	--	--
FN3	--	--	--	--	--	--	5.3	1.25	High Magnesium
Owens, Frances #2529-5377									
FO1	--	--	--	6.7	--	--	6.0	--	--
FO2-3	--	--	--	4.9	1.5	High Magnesium	--	--	--
FO4-5	--	--	--	4.7	1.5	High Magnesium	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Owens, Sally #154-1037									
AOM1	--	--	--	6.2	--	--	--	--	--
AOM2	--	--	--	5.4	1.0	High Magnesium	--	--	--
Palecheck, Bill #3227-1062									
DBP1	6.5	--	--	6.7	--	--	--	--	--
DBP2	6.6	--	--	6.4	--	--	--	--	--
DBP3	6.4	--	--	6.6	--	--	--	--	--
Palecheck, Bill #3228-1797									
PC1	6.6	--	--	--	--	--	--	--	--
PC2	6.6	--	--	--	--	--	--	--	--
PC3	6.6	--	--	--	--	--	--	--	--
PC5	6.0	--	--	--	--	--	--	--	--
PC6	5.9	--	--	--	--	--	--	--	--
PC7+9	5.9	--	--	--	--	--	--	--	--
PC8	6.5	--	--	--	--	--	--	--	--
PC10	6.0	--	--	--	--	--	--	--	--
PC11	6.1	--	--	--	--	--	--	--	--
PC12	6.0	--	--	--	--	--	--	--	--
Palecheck, Bill #3361-2579									
PCU1	6.2	--	--	--	--	--	--	--	--
PCU2	6.3	--	--	--	--	--	--	--	--
PCU3	6.0	--	--	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Phillips, B. - Home #3738-6070									
BPH2A	6.2	--	--	--	--	--	--	--	--
BPH2B	6.2	--	--	--	--	--	--	--	--
Phillips, B. - Tower #3738-883									
BPT1A	6.0	--	--	--	--	--	--	--	--
BPT1B	6.0	--	--	--	--	--	--	--	--
BPT2	6.4	--	--	--	--	--	--	--	--
Phillips, G. - Nutters #3737-240									
GPM1A	--	--	--	6.0	--	--	5.5	1.0	High Magnesium
GPM1B	--	--	--	6.0	--	--	5.5	1.0	High Magnesium
GPM2	--	--	--	6.0	--	--	--	--	--
GPM3	--	--	--	5.4	1.0	High Magnesium	5.3	1.25	High Magnesium
Phillips, G. - Paige #3737-234									
GP1	--	--	--	5.7	1.0	High Magnesium	--	--	--
GP2	--	--	--	5.8	1.0	High Magnesium	--	--	--
GP3	--	--	--	5.3	1.25	High Magnesium	--	--	--
GP4	--	--	--	5.5	1.0	High Magnesium	--	--	--
Phillips, M. - Home #3740-6069									
MPH1	6.2	--	--	6.1	--	--	5.8	1.0	High Magnesium
MPH2	6.0	--	--	--	--	--	--	--	--
MPH5	6.8	--	--	--	--	--	--	--	--
MPH6+7	6.6	--	--	--	--	--	--	--	--
MPH8	6.3	--	--	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Phillips, M. - Home Right #3740-6071									
MPR1+4	5.2	1.5	High Magnesium	6.1	--	--	--	--	--
MPR2+3	5.3	1.5	High Magnesium	--	--	--	--	--	--
Phillips, M. - Twilley #3741-242									
MGP1	6.2	--	--	--	--	--	--	--	--
MGP2+3	6.6	--	--	--	--	--	--	--	--
Phillips, V. - Home #3739-6068									
VP1	6.6	--	--	6.5	--	--	--	--	--
VP2	6.5	--	--	5.9	0.75	High Magnesium	5.7	1.0	High Magnesium
VP3+4	6.2	--	--	6.2	--	--	--	--	--
VP5+6	6.6	--	--	6.1	--	--	--	--	--
Phillips, V. - RockaWalkin #3745-6016									
BPR1B	6.7	--	--	6.8	--	--	6.2	--	--
BPR1F	6.6	--	--	6.3	--	--	--	--	--
BPR2B	6.2	--	--	5.5	1.0	High Magnesium	5.1	1.5	High Magnesium
BPR2F	5.9	--	--	5.5	1.0	High Magnesium	--	--	--
Phillps, V. - Twilley #3739-239									
VPT1+4	6.9	--	--	--	--	--	--	--	--
VPT2	6.9	--	--	6.0	--	--	6.8	--	--
VPT3	6.8	--	--	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Pilchard, Paige #1540-401									
PPA1	--	--	--	6.2	--	--	--	--	--
PPA2	--	--	--	6.3	--	--	--	--	--
PPA3	--	--	--	6.4	--	--	--	--	--
Reynolds, Will #1230-1013									
WR1	5.8	1.0	High Magnesium	--	--	--	--	--	--
WR2	5.3	1.25	High Magnesium	--	--	--	--	--	--
Saulsbury, Joby #3706-6052									
JS1	5.4	1.25	High Magnesium	--	--	--	5.9	--	--
JS3	5.3	1.25	High Magnesium	--	--	--	--	--	--
JS4	5.1	1.5	High Magnesium	--	--	--	--	--	--
Saulsbury, Sandra #3965-5601									
S1	5.9	--	--	--	--	--	--	--	--
S2	6.2	--	--	--	--	--	--	--	--
S3	6.0	--	--	--	--	--	--	--	--
Sheman, Louise #1532-1532									
LS1	6.9	--	--	6.8	--	--	--	--	--
Shiles, April #3242-1135									
AS2A	6.3	--	--	--	--	--	--	--	--
AS2B	5.5	1.0	High Magnesium	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Shockley #190-1075									
SH2	4.8	1.5	High Magnesium	--	--	--	--	--	--
SH3	6.0	--	--	--	--	--	--	--	--
SH4+9	5.1	1.5	High Magnesium	--	--	--	--	--	--
SH5	5.8	1.0	High Magnesium	--	--	--	--	--	--
SH6	5.4	1.25	High Magnesium	--	--	--	--	--	--
SH7	5.4	1.25	High Magnesium	--	--	--	--	--	--
SH8	5.8	1.0	High Magnesium	--	--	--	--	--	--
Spear #213-1102									
SP1	5.4	1.0	High Magnesium	6.6	--	--	--	--	--
SP2	5.6	1.0	High Magnesium	7.1	--	--	--	--	--
SP4	6.4	--	--	6.1	--	--	--	--	--
Todd #243-1132									
T1	6.7	--	--	--	--	--	--	--	--
T2	6.7	--	--	--	--	--	--	--	--
Twilley, Eric #4049-6084									
ET1	7.5	--	--	--	--	--	--	--	--
ET2	7.0	--	--	--	--	--	--	--	--
Wang, Henry #3528-1081									
HW1	4.9	1.5	High Magnesium	5.3	1.25	High Magnesium*	--	--	--
HW2	5.2	1.5	High Magnesium	5.0	1.5	High Magnesium*	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Webster, P. # 1510-353									
BR1	5.5	1.0	High Magnesium	--	--	--	--	--	--
BR2	6.6	--	--	--	--	--	--	--	--
BR3	6.2	--	--	--	--	--	--	--	--
BR4	5.2	1.5	High Magnesium	--	--	--	--	--	--
BR5	5.1	1.5	High Magnesium	--	--	--	--	--	--
White, Taylor #437-1327									
TW1	6.1	--	--	6.3	--	--	--	--	--
TW2	6.4	--	--	6.0	--	--	--	--	--
TW3	6.4	--	--	6.9	--	--	--	--	--
TW4	6.7	--	--	6.9	--	--	--	--	--
Wilson, Donald #263-1154									
DW1+2	5.7	1.0	High Magnesium	--	--	--	--	--	--
DW3	5.7	1.0	High Magnesium	--	--	--	--	--	--
DW4	5.5	1.0	High Magnesium	--	--	--	--	--	--
Wilson, S. #2396-5299									
LW1	5.2	1.5	High Magnesium	--	--	--	--	--	--

CALLOWAY BROS.
2025 LIME RECOMMENDATIONS

Farm	22/23	Tons/ Acre	Type of Lime	23/24	Tons/ Acre	Type of Lime	24/25	Tons/ Acre	Type of Lime
Woglhman, George #149-1032									
EP1	--	--	--	5.6	1.0	High Magnesium	--	--	--
EP2	--	--	--	5.0	1.5	High Magnesium	--	--	--
EP3	--	--	--	6.7	--	--	--	--	--

* Where there is a lime recommendation and the field was limed within the last year additional lime may not be needed. If limed within the last year and the pH is still below 5.8 additional soil sampling may be needed. There may be a need for lime for certain vegetable crops even with 6.0 pH or higher.

** Depends on what crop is to be grown.

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

WHEAT/SOYBEANS

Phillips, V. Rockawalkin #3745

BPR1B	40-0-120-25 sulfur	Topdress prior to greenup
BPR1F	40-0-130-25 sulfur	Topdress prior to greenup
BPR2B	40-0-150-25 sulfur	Topdress prior to greenup
PBR2F	40-0-140-25 sulfur	Topdress prior to greenup

All Fields:

50-0-0-Mn*	Topdress prior to jointing

Blending nitrogen with water will reduce foliage burn.

If straw is to be harvested, an additional 40 lbs of K_2O should be applied.

* Manganese should be applied with one of the topdress applications.
(example: 2 quarts per acre 5% chelate, 1.5 lbs EDTA powder, or
3 lbs manganese sulfate).

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

IRRIGATED FIELD CORN

NO MANURE

Hales, Luffman #756-1665		
HWL1	0-0-150	Broadcast
Home, Hunt Club #2263-1085		
HC1 (see manure recommendations)	0-0-160	Broadcast
HC2	0-0-160	Broadcast
All Fields:		
	40-20-0-1.5 zinc	Planter
All Fields:		
	50-0-0-30-0.5 S* B	Early topdress or at planting
	130-0-0-1.0 boron	Sidedress
	40-0-0	Total injected through irrigation
	15-0-0	Injected at tassel development
	15-0-0	Injected just prior to tassel emergence
	10-0-0	Injected just after pollination

* Sulfur could be applied at Planting/Early Topdress, Sidedress, or split applied.

****Due to soil phosphorus levels being higher than 500 ppm, no phosphorus is to be applied.**

A 15 lb per acre nitrogen credit should be given in 2025 for all fields where soybeans were grown in 2024.

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN

NO MANURE

Beazer East #1482-306		
BE1A (see manure recommendations)	0-0-120	Broadcast
BE1B (see manure recommendations)	0-0-120	Broadcast
BE3 (see manure recommendations)	0-0-120	Broadcast
BE4 (see manure recommendations)	0-0-120	Broadcast
BE5 (see manure recommendations)	0-0-120	Broadcast
Burnett King #3039-5746		
KB4 (see manure recommendations)	0-0-120	Broadcast
KB6 (see manure recommendations)	0-0-140	Broadcast
KB10 (see manure recommendations)	0-0-120	Broadcast
Catlin		
CAT2 (see manure recommendations)	0-0-100	Broadcast
CAT3+4	0-0-120	Broadcast
CAT5 (see manure recommendations)	0-0-120	Broadcast
CAT6 (see manure recommendations)	0-0-140	Broadcast
CAT7 (see manure recommendations)	0-0-140	Broadcast
CAT8 (see manure recommendations)	0-0-110	Broadcast
CAT9 (see manure recommendations)	0-0-100	Broadcast
DietZ, Leonard #3785-6113		
LD1 (see manure recommendations)	0-0-120	Broadcast
Hales Glasgow #3288-5797		
HG1 (see manure recommendations)	0-0-130	Broadcast
Hales, Hotten #868-1797		
HH1	0-0-120	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN

NO MANURE

Hales Jekins Terrapin #3214-1879		
HJT1	0-0-140	Broadcast
HJT2	0-0-120	Broadcast
Hales Jekins Warwick #3214-1878		
HJ1	0-0-120	Broadcast
HJ2	0-0-120	Broadcast
Hales Packing Shed #1624-485		
HPS1	0-0-120	Broadcast
HPS2	0-0-120	Broadcast
Hales Packing Shed Left #3216-1661		
HPL	0-0-100	Broadcast
Hales Packing Shed Right #3216-1661		
HPR	0-0-130	Broadcast
Hales Pusey, Elton #1626-930		
HEP1	0-0-120	Broadcast
Hales Tom, Hall #1626-930		
HTH1	0-0-120	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN

NO MANURE

Hales Malone AG #4007-6312+4174-6498		
HM1	0-0-120	Broadcast
HM2	0-0-120	Broadcast
Hales Poly Walston #1610-473		
HPW1	0-0-140	Broadcast
Home, Doug's #3527-5267		
HD2 (see manure recommendations)	0-0-120	Broadcast
HD5 (see manure recommendations)	0-0-140	Broadcast
HD6 (see manure recommendations)	0-0-120	Broadcast
Morgan, William		
WM1 (see manure recommendations)	0-0-140	Broadcast
WM2 (see manure recommendations)	0-0-140	Broadcast
Nashay, Frank #257-1146 + 3041-5748		
FN1 (see manure recommendations)	0-0-130	Broadcast
FN2 (see manure recommendations)	0-0-100	Broadcast
FN3 (see manure recommendations)	0-0-120	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN

NO MANURE

Palecheck, Bill #3228-1797		
PC1 (see manure recommendations)	0-0-140	Broadcast
PC2 (see manure recommendations)	0-0-140	Broadcast
PC3 (see manure recommendations)	0-0-140	Broadcast
PC5 (see manure recommendations)	0-0-140	Broadcast
PC6 (see manure recommendations)	0-0-140	Broadcast
PC7+9 (see manure recommendations)	0-0-140	Broadcast
PC8 (see manure recommendations)	0-0-140	Broadcast
PC10 (see manure recommendations)	0-0-140	Broadcast
PC11 (see manure recommendations)	0-0-140	Broadcast
PC12 (see manure recommendations)	0-0-140	Broadcast
Palecheck, Bill #3361-2579		
PCU1 (see manure recommendations)	0-0-130	Broadcast
PCU2 (see manure recommendations)	0-0-110	Broadcast
PCU3 (see manure recommendations)	0-0-130	Broadcast
Phillips, B Home #3758-6070		
BPH2A (see manure recommendations)	0-0-140	Broadcast
Phillips, G-Nutters #3737-240		
GPM1A (see manure recommendations)	0-0-130	Broadcast
GPM1B (see manure recommendations)	0-0-130	Broadcast
GPM2 (see manure recommendations)	0-0-120	Broadcast
GPM3 (see manure recommendations)	0-0-140	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN (Continued)

NO MANURE

Phillips, M.-Home #3740-6069		
MPH1	0-0-140	Broadcast
MPH2 (see manure recommendations)	0-0-140	Broadcast
MPH5	0-0-130	Broadcast
MPH6+7	0-0-100	Broadcast
MPH8 (see manure recommendations)	0-0-140	Broadcast
Phillips, M.-Home Right #3740-6071		
MPR1+4	0-0-90	Broadcast
MPH2+3 (see manure recommendations)	0-0-120	Broadcast
Phillips, M. Twilley, #3741-242		
MGP1 (see manure recommendations)	0-0-100	Broadcast
MGP2+3 (see manure recommendations)	0-0-70	Broadcast
Phillips, V. Home, #3739-6068		
VP1 (see manure recommendations)	0-0-140	Broadcast
Phillips, V. Twilley, #3741-242		
VPT1+4 (see manure recommendations)	0-0-80	Broadcast
VPT2 (see manure recommendations)	0-0-140	Broadcast
VPT3 (see manure recommendations)	0-0-120	Broadcast
Reynolds, Will #1230-1013		
WR2 (see manure recommendations)	0-0-140	Broadcast
Spear #213-1102		
SP1 (see manure recommendations)	0-0-100	Broadcast
SP2 (see manure recommendations)	0-0-140	Broadcast
SP4 (see manure recommendations)	0-0-140	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN (Continued)

NO MANURE

Twilley, Eric #4049-6084		
ET1 (see manure recommendations)	0-0-130	Broadcast
ET2 (see manure recommendations)	0-0-140	Broadcast
Wilson Donald #263-1154		
DW1+2 (see manure recommendations)	0-0-90	Broadcast
DW3 (see manure recommendations)	0-0-100	Broadcast
DW4 (see manure recommendations)	0-0-100	Broadcast
Woglhman, G. #149-1032		
EP1 (see manure recommendations)	0-0-130	Broadcast
EP2 (see manure recommendations)	0-0-140	Broadcast
EP3 (see manure recommendations)	0-0-140	Broadcast

Nashay, Frank FN1, FN3
Palecheck, Bill #3361-2579 PCU1
Phillips, M.-Twilley MGP1, MGP2+3

40-50-0-1.0 zinc Planter

Beazer East BE3, BE4, BE5
Palechick Bill PCU2, PCU3
Wilson Donald DW4:

40-40-0-1.0 zinc Planter

Beazer East BE1A, BE1B
Palechick Bill PC5, PC10, PC11, PC12, PC7+9
Phillips, G. Nutters GPM3
Phillips, M-Home Right MPR2+3
Wilson Donald DW3:

40-30-0-1.0 zinc Planter

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN (Continued)

NO MANURE

Burnett King All, Catlin All, Dietz Leonard LD1
Hales Hotten HH1, Hales Jekins Terrapin All
Hales packing shed All, Hales packing shed left HPL
Hales packing shed right HPR, Hales Pussey Elton HEP1
Hales Tom Hall HTH1, Hales Malone AG HM1, HM2
Hales Poly Walston HPW1, Home Doug's All
Morgan William All, Frank Nashay FN2
Palechick Bill PC1, PC2, PC3, PC6, PC8
Phillips, B.-Home BPH2A, Phillips G.-Nutters GPM1A, GPM1B, GPM2
Phillips, M.-Home All, Phillips, M.-Home Right MPR1+4
Phillips, V.-Home VP1, Phillips, V.-Twilley All
Reynolds Will WR2, Spear All, Twilley Eric All
Wilson Donald DW1+2, Woglham George EP1, EP3:

40-20-0-1.0 zinc	Planter

All Other Fields:

40-0-0-1.0 zinc	Planter

All Fields:

40-0-0-25 sulfur	Early topdress or at planting
80-0-0-0.75 boron	Sidedress

* Sulfur could be applied at Planting/Early Topdress, Sidedress, or split applied.

**** Due to soil phosphorus levels being higher than 500 ppm, no phosphorus is to be applied.**

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN (Continued)

NO MANURE

Allow for the following nitrogen credits on the from previously applied manure:

Beazer East	BE1A	27 lbs per acre
	BE1B-BE5	24 lbs per
Burnett King	All	23 lbs per acre
Catlin	CAT2, CAT5-7	4 lbs per acre
	CAT8, CAT9	2 lbs per acre
Dietz, Leonard	LD1	23 lbs per acre
Phillips, B.-Home	BPH2A	14 lbs per acre
Phillips, G.-Nutters	GPM1A, GPM1B, GPM3	4 lbs per acre
	GPM2	2 lbs per acre
Phillips, M.-Home	MPH1, MPH5, MPH6+7	16 lbs per acre
	MPH2	4 lbs per acre
	MPH8	6 lbs per acre
Phillips, M.-Home Right	MPR1+4	24 lbs per acre
	MPR2+3	39 lbs per acre
Phillips, M.-Twilley	All	23 lbs per acre
Phillips, V.- Twilley	VPT1+4	23 lbs per acre
	VPT2, VPT3	12 lbs per acre
Reynolds, Will	WR2	4 lbs per acre
Wislon, Donald	All	4 lbs per acre
Woglhman, George	All	4 lbs per acre

A 15 lb per acre nitrogen credit should be given in 2025 for all fields where soybeans were grown in 2024.

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

FULL SEASON SOYBEANS

Adkins, Jimmy #311-1210		
JA1	0-0-120-20 sulfur	Broadcast
Calloway, Tommy #2152-1020		
TC1	0-0-80-15 sulfur	Broadcast
TC2	0-0-120-15 sulfur	Broadcast
Catlin #209-1098		
CAT10	0-0-100-15 sulfur	Broadcast
Dyer, Will #4041-6466		
WD1A	0-0-110-15 sulfur	Broadcast
WD1B	0-0-110-15 sulfur	Broadcast
Eichelberger, Robert #1535-394		
RE1	0-0-120-15 sulfur	Broadcast
RE2	0-0-120-15 sulfur	Broadcast
Fred Terry #3361		
GE1	0-0-110-15 sulfur	Broadcast
Hales Collins #3217-6119		
HBC1	0-0-100-15 sulfur	Broadcast
HBC2	0-0-100-15 sulfur	Broadcast
Hales Phillips #2778-810		
HP1	0-20-110-15 sulfur	Broadcast
Hales Walmart #728-1554		
HW1	0-0-120-15 sulfur	Broadcast
HW2	0-0-120-15 sulfur	Broadcast
Hatton Faye #229-1118		
FH1	0-0-120-15 sulfur	Broadcast
FH2	0-0-120-15 sulfur	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

FULL SEASON SOYBEANS (Continued)

Hensely, B. #1481-305		
HN1	0-0-100-15 sulfur	Broadcast
HN2*	0-0-60-15 sulfur	Broadcast
HN3*	0-0-70-15 sulfur	Broadcast
Hochmoth, Bill #3138-5757		
BH1	0-0-130-20 sulfur	Broadcast
BH2	0-0-130-20 sulfur	Broadcast
Home #3527-395		
H1*	0-0-60-15 sulfur	Broadcast
H2*	0-0-60-15 sulfur	Broadcast
H3	0-0-100-20 sulfur	Broadcast
H4	0-0-70-15 sulfur	Broadcast
H5*	0-0-60-15 sulfur	Broadcast
H7	0-0-100-20 sulfur	Broadcast
H8	0-0-120-20 sulfur	Broadcast
H9	0-0-100-20 sulfur	Broadcast
H11	0-0-100-20 sulfur	Broadcast
H12	0-0-90-20 sulfur	Broadcast
H13	0-0-130-20 sulfur	Broadcast
H14	0-0-100-20 sulfur	Broadcast
H15	0-0-100-20 sulfur	Broadcast
H16	0-0-100-20 sulfur	Broadcast
H17	0-0-90-20 sulfur	Broadcast
H18*	0-0-70-15 sulfur	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

FULL SEASON SOYBEANS (Continued)

Home, Bobby & Mary's #5596-1023/1024		
B2	0-0-100-20 sulfur	Broadcast
Home, Nan's #3527-1119		
N1	0-0-100-20 sulfur	Broadcast
N2	0-0-120-20 sulfur	Broadcast
N3	0-0-100-20 sulfur	Broadcast
N4	0-0-100-20 sulfur	Broadcast
Home, Tank Farm #3527-1022		
HT1	0-0-100-20 sulfur	Broadcast
HT2	0-0-100-20 sulfur	Broadcast
HT3	0-0-110-20 sulfur	Broadcast
HT4	0-0-100-20 sulfur	Broadcast
Kenny, David #1465-6332		
DK1*	0-0-130-20 sulfur	Broadcast
Palecheck, Bill #3227-1062		
DBP1	0-0-120-20 sulfur	Broadcast
DBP2	0-0-100-20 sulfur	Broadcast
DBP3	0-0-100-20 sulfur	Broadcast
Phillips, B.-Home #3738-6070		
BPH2B	0-0-120-15 sulfur	Broadcast
Phillips, B.-Tower #3738-883		
BPT1A	0-0-70-15 sulfur	Broadcast
BPT1B	0-0-70-15 sulfur	Broadcast
BPT2	0-20-60-15 sulfur	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

FULL SEASON SOYBEANS (Continued)

Phillips, G.-Paige #3738-234		
GP1*	0-0-60-15 sulfur	Broadcast
GP2*	0-0-60-15 sulfur	Broadcast
GP3*	0-0-60-15 sulfur	Broadcast
GP4*	0-0-60-15 sulfur	Broadcast
Phillips, M.-Twilley #3741-242		
MGP1	0-40-60-15 sulfur	Broadcast
MGP2+3	0-40-60-15 sulfur	Broadcast
Phillips, V.-Twilley #3739-239		
VPT1+4*	0-0-60-15 sulfur	Broadcast
VPT2	0-0-110-15 sulfur	Broadcast
VPT3	0-0-90-15 sulfur	Broadcast
Pilchard, Paige #1540-401		
PPA1*	0-0-70-15 sulfur	Broadcast
PPA2	0-50-110-15 sulfur	Broadcast
PPA3	0-30-120-15 sulfur	Broadcast
Saulsbury, Sandra #3965-5601		
S1	0-0-120-15 sulfur	Broadcast
S2*	0-0-70-15 sulfur	Broadcast
S3*	0-0-70-15 sulfur	Broadcast
Sherman, Louise #1532-15632		
LS1	0-0-120-15 sulfur	Broadcast
Wang, Henry #3528-1081		
HW1	0-20-70-15 sulfur	Broadcast
HW2	0-0-90-15 sulfur	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

FULL SEASON SOYBEANS (Continued)

Webster, Pat #1510-353		
BR1	0-0-90-15 sulfur	Broadcast
BR2	0-0-70-15 sulfur	Broadcast
BR3*	0-0-60-15 sulfur	Broadcast
BR4	0-0-70-15 sulfur	Broadcast
BR5	0-40-110-15 sulfur	Broadcast
Wilson, S #2396-5299		
LW1	0-0-90-15 sulfur	Broadcast

Where Full Season Soybeans are being grown under irrigation, a minimum of 90 lbs Potassium should be applied to achieve maximum yield potential.

***All fields have high enough fertility levels that fertilization in 2024 should not affect yield potential. There will likely be no significant decline in soil fertility if no fertilizer is used in 2024.**

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

SORGHUM

	NO MANURE	
Adkins Historical #3787-6115		
ADH1	40-0-80-20 sulfur	Broadcast
ADH2	40-0-60-20 sulfur	Broadcast
Ashcraft, Steve #153-1036		
AO2	40-0-110-20 sulfur	Broadcast
Ashton, Alfred		
AA1	40-0-120-20 sulfur	Broadcast
AA2	40-0-110-20 sulfur	Broadcast
AA3	40-0-130-20 sulfur	Broadcast
AA4	40-0-120-20 sulfur	Broadcast
AA5	40-0-110-20 sulfur	Broadcast
Edwards, John		
JE3	40-0-60-20 sulfur	Broadcast
JE5	40-0-70-20 sulfur	Broadcast
JE6	40-0-70-20 sulfur	Broadcast
JE7+8	40-0-100-20 sulfur	Broadcast
John-Upper Ferry #1484-308		
J1	40-40-80-20 sulfur	Broadcast
J2	40-0-100-20 sulfur	Broadcast
Moore, Pat #256-1145		
PM3	40-0-60-20 sulfur	Broadcast
PM4	40-0-70-20 sulfur	Broadcast
Morgan, William #244-1133		
WM1	40-30-130-20 sulfur	Broadcast
WM2	40-0-130-20 sulfur	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

SORGHUM (Continued)

NO MANURE

Owens, Francis		
FO2-3	40-0-110-20 sulfur	Broadcast
FO4	40-0-120-20 sulfur	Broadcast
Owens, Sally #154-1037		
AOM2	40-0-100-20 sulfur	Broadcast
Reynolds, Will #1230-1013		
WR1	40-0-130-20 sulfur	Broadcast
Shiles, April #3242-1135		
AS2A	40-0-110-20 sulfur	Broadcast
AS2B	40-0-70-20 sulfur	Broadcast
Shockely #190-1075		
SH2	40-0-120-20 sulfur	Broadcast
SH3	40-0-60-20 sulfur	Broadcast
SH4+9	40-50-80-20 sulfur	Broadcast
SH5	40-0-70-20 sulfur	Broadcast
SH6	40-0-80-20 sulfur	Broadcast
SH7	40-40-100-20 sulfur	Broadcast
SH8	40-40-60-20 sulfur	Broadcast
Todd #243-1132		
T1	40-0-100-20 sulfur	Broadcast
T2	40-0-120-20 sulfur	Broadcast
White, Taylor, R. #437-1327		
TW1	40-0-110-20 sulfur	Broadcast
TW2	40-60-60-20 sulfur	Broadcast
TW3	40-0-100-20 sulfur	Broadcast
TW4	40-0-100-20 sulfur	Broadcast

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

SORGHUM (Continued)

	NO MANURE	
Woglham, George #149+1032		
EP1	40-20-100-20 sulfur	Broadcast
EP2	40-0-120-20 sulfur	Broadcast
EP3	40-0-110-20 sulfur	Broadcast
All Fields:		
	35-0-0	Sidedress

If not side-dressed and all of the nitrogen is applied at planting, coated urea or material to reduce the loss of nitrogen should be used.

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

SORGHUM (Continued)

NO MANURE

Allow for the following nitrogen credits on the from previously applied manure:

Adkins, Historical	ADH2	12 lbs per acre
Ashcraft, Steve	AO2	27 lbs per acre
Ashcraft, Alfred	All	23 lbs per acre
Edwards, John	JE3, JE6, JE7+8 JE5	8 lbs per acre 23 lbs per acre
John-Upper, Ferry	All	31 lbs per acre
Moore, Pat	PM3	12 lbs per acre
Owen, Francis	All	27 lbs per acre
Owens, Sally	AOM2	27 lbs per acre
Reynolds, Will	WR1	27 lbs per acre
Shockley	SH2, SH4+9, SH5, SH7 SH8 SH3 SH6	27 lbs per acre 12 lbs per acre 4 lbs per acre
White, Taylor R.	TW1, TW2, TW3 TW4	35 lbs per acre 12 lbs per acre
Woglham, George	All	4 lbs per acre

A 15 lb per acre nitrogen credit should be given in 2025 for all fields where soybeans were grown in 2024.

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

WATERMELONS

Adkins, Earnest #3705-6051		
EA2	0-0-120	Early Broadcast and Incorporated
Adkins, Steve #153-1036		
AO1	0-0-110	Early Broadcast and Incorporated
Edwards, John #3789-6117		
JE3	0-0-80	Early Broadcast and Incorporated
JE5	0-0-100	Early Broadcast and Incorporated
JE6	0-0-100	Early Broadcast and Incorporated
JE7+8	0-0-140	Early Broadcast and Incorporated
Glasgow, Elizabeth #1577-450		
EG1	0-0-150	Early Broadcast and Incorporated
Hales, Collins # 3288-5797		
HBC1	0-0-110	Early Broadcast and Incorporated
HBC2	0-0-170	Early Broadcast and Incorporated
Hales Packing Shed #1624-485		
HPS1	0-0-130	Early Broadcast and Incorporated
HPS2	0-0-130	Early Broadcast and Incorporated
Hales Packing Shed (L) #3216-1662		
HPL	0-0-100	Early Broadcast and Incorporated
Hales Packing Shed (R) #3216-1661		
HPR	0-0-120	Early Broadcast and Incorporated
Hales Tom Hall #1995-5094		
HTH1	0-0-130	Early Broadcast and Incorporated
Hales MaloneAG #4007-6312		
HM1	0-0-130	Early Broadcast and Incorporated
HM2	0-0-120	Early Broadcast and Incorporated
Hales Walmart #728-1554		
HWM1	0-0-170	Early Broadcast and Incorporated
HWM2	0-0-160	Early Broadcast and Incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

WATERMELONS (Continued

Hochmuth, Pat #728-1554		
PH1	0-0-180	Early Broadcast and Incorporated
PH2	0-0-150	Early Broadcast and Incorporated
PH3	0-0-170	Early Broadcast and Incorporated
PH4	0-0-180	Early Broadcast and Incorporated
PH5A	0-0-180	Early Broadcast and Incorporated
Home #3527-395		
H19	0-0-100	Early Broadcast and Incorporated
Home, Bobby & Mary's #3596		
B1	0-0-80	Early Broadcast and Incorporated
Home, Doug's #3527-5167		
HD2	0-0-130	Early Broadcast and Incorporated
HD5	0-0-170	Early Broadcast and Incorporated
HD6	0-0-110	Early Broadcast and Incorporated
Home, Lloyd #3527-2339		
HL1	0-0-120	Early Broadcast and Incorporated
Owens, Frances #2529-5377		
FO1	0-0-120	Early Broadcast and Incorporated
Owens, Sally #154-1037		
AOM1	0-0-140	Early Broadcast and Incorporated
Phillips, V. Home #3739-6068		
VP2	0-0-80	Early Broadcast and Incoporated
VP3+4	0-0-80	Early Broadcast and Incoporated
VP5+6	0-0-80	Early Broadcast and Incoporated
Saulsbury, Joby #3706-6052		
JS1	0-0-100	Early Broadcast and Incorporated
JS3	0-0-180	Early Broadcast and Incorporated
JS4	0-0-170	Early Broadcast and Incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

WATERMELONS (Continued)

Todd #243-1132		
T1	0-0-140	Early Broadcast and Incorporated
T2	0-0-160	Early Broadcast and Incorporated
Twilley, Eric #4049-6084		
ET1	0-0-140	Early Broadcast and Incorporated
ET2	0-0-180	Early Broadcast and Incorporated
Wilson, S #2396-5299		
LW1	0-0-130	Early Broadcast and Incorporated

Wilson, S LW1:

70-40-0-30-1.0-4.0-1 S Zn Mn B	Broadcast and incorporated just prior to laying plastic

Home, Doug's HD6
Phillips, V. Home VP2, VP5+6:

70-30-0-30-1.0-4.0-1 S Zn Mn B	Broadcast and incorporated just prior to laying plastic

Phillips, V. Home VP2, VP3+4:

70-20-0-30-1.0-4.0-1 S Zn Mn B	Broadcast and incorporated just prior to laying plastic

All other fields:

70-0-0-30- 4.0 - 0.5 – 0.5 S Mn Zn B	Broadcast and incorporated just prior to laying plastic

20-0-0	Injected as vines begin to run
20-0-0	Injected between vines running off plastic and first bloom
20-0-10	Injected at first fruit set
20-0-10	Injected at first harvest

WATERMELONS (Continued)

More fertilizer may be needed after second harvest if vines are holding up well and extended harvest is likely. A full analysis fertilizer may be needed at that time.

All recommendations are based on broadcast rates. If fertilizer is banded, it should be at a reduced rate.

Allow for the following nitrogen credits from previously applied manure:

Adkins, Earnest	EA2	4 lbs per acre
Adkins, Steve	AO1	24 lbs per acre
Edwards, John	JE3, JE6-8	8 lbs per acre
	JE5	23 lbs per acre
Glasgow, Elizabeth	EG1	27 lbs per acre
Owens, Frances	FO1	24 lbs per acre
Owens, Sally	AOM1	24 lbs per acre
Saulsbury, Joby	All	4 lbs per acre

A 15 lb per acre nitrogen credit should be given in 2025 for all fields where soybeans were grown in 2024 .

CALLOWAY BROTHERS
2025 RECOMMENDATIONS BASED ON CROP NUTRIENT REQUIREMENTS

DRY LAND FIELD CORN

NO MANURE

Beazer East #1482-306		
BE1A (see manure recommendations)	0-0-120	Broadcast
BE1B (see manure recommendations)	0-0-120	Broadcast
BE3 (see manure recommendations)	0-0-120	Broadcast
BE4 (see manure recommendations)	0-0-120	Broadcast
BE5 (see manure recommendations)	0-0-120	Broadcast
Burnett King #3039-5746		
KB4 (see manure recommendations)	0-0-120	Broadcast
KB6 (see manure recommendations)	0-0-140	Broadcast
KB10 (see manure recommendations)	0-0-120	Broadcast
Catlin		
CAT2 (see manure recommendations)	0-0-100	Broadcast
CAT3+4	0-0-120	Broadcast
CAT5 (see manure recommendations)	0-0-120	Broadcast
CAT6 (see manure recommendations)	0-0-140	Broadcast
CAT7 (see manure recommendations)	0-0-140	Broadcast
CAT8 (see manure recommendations)	0-0-110	Broadcast
CAT9 (see manure recommendations)	0-0-100	Broadcast
DietZ, Leonard #3785-6113		
LD1 (see manure recommendations)	0-0-120	Broadcast
Hales Glasgow #3288-5797		
HG1 (see manure recommendations)	0-0-130	Broadcast
Hales, Hotten #868-1797		
HH1	0-0-120	Broadcast

No Manvre

Catlin CAT 2+3

Mike Phillips Home MPH 1, 5, 6+7
MPR 1+4

George Woglhman EP 2

UNIVERSITY OF MARYLAND EXTENSION

POULTRY LITTER QUANTITY ESTIMATE

Name: **eddie calloway** Tract / Farm: Date:

Houses included:

		Bird type:	**Broiler**
		Average Bird Market Weight (lbs):	**7**
A	Years between total cleanouts:	Yr. next total cleanout:	**2028**
		- Yr. last total cleanout:	**2018**
		= Years in cleanout cycle:	10
B.	Total # of birds per flock (for all houses on this cleanout cycle):		**65,400**
C.	Flocks per year		**5**
D.	Number of flocks per cleanout cycle (A x C):		50
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: *		**1.4192**
G.	Tons cake/crust produced per flock (B x E/1000):		13
H.	Tons cake/crust produced per cycle (G x D)		654
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):		4,641
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):		3,987
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):		399
L.	Tons of litter + cake/crust produced per year (I/A)		**464**

* 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)
2019	0	399	**10**	40	5	65		40
2020	424	823	**40**	329	5	65		329
2021	559	958	**40**	383	5	65		383
2022	640	1,039	**40**	416	5	65		416
2023	689	1,087	**40**	435	5	65		435
2024	718	1,116	**40**	447	5	65		447
2025	735	1,134	**40**	454	5	65		454
2026	746	1,144	**40**	458	5	65		458
2027	752	1,151	**40**	460	5	65		460
2028	756	1,155	**100**	1,155	5	65		1,155
				4,575	50	654	0	4,575

*** 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.

UNIVERSITY OF MARYLAND EXTENSION

POULTRY LITTER QUANTITY ESTIMATE

Name: **Bill Calloway** Tract / Farm: Date:

Houses included:

		Bird type:	**Broiler**
		Average Bird Market Weight (lbs):	**7**
A.	Years between total cleanouts:	Yr. next total cleanout:	**2028**
		- Yr. last total cleanout:	**2018**
		= Years in cleanout cycle:	10
B.	Total # of birds per flock (for all houses on this cleanout cycle):		**91,400**
C.	Flocks per year		**5**
D.	Number of flocks per cleanout cycle (A x C):		50
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: *		**1.4192**
G.	Tons cake/crust produced per flock (B x E/1000):		18
H.	Tons cake/crust produced per cycle (G x D)		914
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):		6,486
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):		5,572
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):		557
L.	Tons of litter + cake/crust produced per year (I/A)		649

* 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)
2019	0	557	**10**	56	5	91		56
2020	593	1,150	**40**	460	5	91		460
2021	781	1,339	**40**	535	5	91		535
2022	895	1,452	**40**	581	5	91		581
2023	962	1,520	**40**	608	5	91		608
2024	1,003	1,560	**40**	624	5	91		624
2025	1,028	1,585	**40**	634	5	91		634
2026	1,042	1,599	**40**	640	5	91		640
2027	1,051	1,608	**40**	643	5	91		643
2028	1,056	1,614	**100**	1,614	5	91		1,614
				6,394	50	914	0	6,394

*** 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.

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Calloway			Year	2016
	24 (prim)	29 (prim)	32 (prim)	34 (prim)	35 (prim)
Account ID	000000000000000	00000000000000	0000000000000000	0000000000000000	
County	Wicomico	Wicomico	Wicomico	Wicomico	Wicomico
Tract or Farm ID	Drewer	Catlin	Catlin	Catlin	Catlin
Field ID	KB6	CAT3,4	CAT6	CAT8	CAT9
MUSYM	CoA	KgB	HvA	HvA	HnA
Area | Crop	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres
Organics					
R Factor	195	195	195	195	195
Adj. K Factor | LS Factor	0.22 | 0.10	0.12 | 0.10	0.14 | 0.10	0.14 | 0.10	0.08 | 0.10
C | P Factors	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87
RUSLE A	0.30	0.16	0.19	0.19	0.11
		Transport Risk Factors			
SED Value	2	2	2	2	2
Soil Permeability Class	Moderately Slow	Moderately Rapid	Moderate	Moderate	Moderately Rapid
Field slope | Concave? | SR Factor	0.50 | No | 1.6	0.50 | No | 1.4	0.50 | No | 1.6	0.50 | No | 1.6	0.50 | No | 1.4
Soil Drainage Class	very poorly	somewhat poorly	poorly	poorly	moderately well
HSG | Artificial Drainage? | SD Factor	B/D | No | 0.0	A/D | No | 0.0	A/D | No | 0.0	A/D | No | 0.0	B | No | 0.0
		Management Factors			
Distance to Water (DF)	> 500 ft | 0.2	< 100 ft | 1.0	< 100 ft | 1.0	< 100 ft | 1.0	100-199 ft | 0.8
Buffer Width & Type (BF)	> 50' veg. | 0.8	< 35' veg. | 1.0	< 35' veg. | 1.0	< 35' veg. | 1.0	< 35' veg. | 1.0
Soil Test P Fertility Index Value	190	417	208	291	300
Degree of P Saturation (DPS M3)	49.4 (est.)	88.1 (est.)	52.4 (est.)	66.6 (est.)	68.1 (est.)
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0
Org. P appl. rates, lb/A | OP * PSC	|228 | - | - | 114	| - | - | - | 0	| 60 | - | - | 30	| 60 | - | - | 30	| 60 | - | - | 30
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Runoff Org. P appl. methods | AMr(o)	| M2 | - | - | 0.40	| - | - | - | 0.00	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Subsurface Org. P appl. methods | AMsub(o)	| M4 | - | - | 0.80	| - | - | - | 0.00	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80
P particulate | P runoff | P subsurface	6 | 4 | 0 |	83 | 25 | 0 |	42 | 19 | 0 |	58 | 23 | 0 |	48 | 17 | 0 |
P Loss Rating Score	10 (L)	108 (H)	60 (M)	82 (M)	65 (M)

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Calloway			Year	2016
	66 (prim)	248 (prim)	84 (prim)	85 (prim)	153 (prim)
Account ID	000000000000000	00000000000000	000000000000000	000000000000000	000000000000000
County	Wicomico	Wicomico	Wicomico	Wicomico	Wicomico
Tract or Farm ID	Home Doug's	Home Doug's	Home Hunt Club	Home Hunt Club	Phillips, B Home
Field ID	HD2	HD5	HC1	HC2	BPH2A
MUSYM	MuA	AsA	WdA	IeB	IeB
Area | Crop	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres
Organics					
R Factor	195	195	195	195	195
Adj. K Factor | LS Factor	0.08 | 0.10	0.17 | 0.10	0.17 | 0.10	0.05 | 0.10	0.05 | 0.27
C | P Factors	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87
RUSLE A	0.11	0.23	0.23	0.07	0.18
Transport Risk Factors					
SED Value	2	2	2	2	2
Soil Permeability Class	Rapid	Rapid	Moderate	Moderate	Moderate
Field slope | Concave? | SR Factor	0.50 | No | 1.4	0.50 | No | 1.4	0.50 | No | 1.6	0.50 | No | 1.6	2.00 | No | 5.6
Soil Drainage Class	very poorly	poorly	moderately well	well	well
HSG | Artificial Drainage? | SD Factor	A/D | No | 0.0	A/D | No | 0.0	C | No | 0.0	A | No | 0.0	A | No | 0.0
Management Factors					
Distance to Water (DF)	> 500 ft | 0.2	> 500 ft | 0.2	< 100 ft | 1.0	< 100 ft | 1.0	100-199 ft | 0.8
Buffer Width & Type (BF)	> 50' veg. | 0.8	> 50' veg. | 0.8	< 35' veg. | 1.0	< 35' veg. | 1.0	> 50' veg. | 0.8
Soil Test P Fertility Index Value	242	256	346	425	301
Degree of P Saturation (DPS M3)	58.3 (est.)	60.5 (est.)	75.9 (est.)	89.4 (est.)	68.3 (est.)
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0
Org. P appl. rates, lb/A | OP * PSC	|228 | - | - | 114	|228 | - | - | 114	|104 | - | - | 52	| - | - | - | 0	|60 | - | - | 30
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Runoff Org. P appl. methods | AMr(o)	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| - | - | - | 0.00	| M2 | - | - | 0.40
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Subsurface Org. P appl. methods | AMsub(o)	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| - | - | - | 0.00	| M4 | - | - | 0.80
P particulate | P runoff | P subsurface	8 | 4 | 0 |	8 | 4 | 0 |	69 | 28 | 0 |	85 | 29 | 0 |	39 | 53 | 0 |
P Loss Rating Score	11 (L)	12 (L)	97 (M)	114 (H)	92 (M)

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Calloway			Year	2016
	165 (prim)	166 (prim)	295 (prim)	172 (prim)	173 (prim)
Account ID	000000000000000	000000000000	0000000000000000	0000000000000	00000000000000
County	Wicomico	Wicomico	Wicomico	Wicomico	Wicomico
Tract or Farm ID	Phillips, Geo-Marks	Phillips, Geo-Marks	Phillips, Geo-Marks	Phillips, Mike H	Phillips, Mike H
Field ID	GPM1A	GPM2	GPM1B	MPH1	MPH2
MUSYM	RkA	RkA	RkA	IeA	RwB
Area | Crop	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres
Organics					
R Factor	195	195	195	195	195
Adj. K Factor | LS Factor	0.17 | 0.10	0.17 | 0.10	0.17 | 1.10	0.05 | 0.10	0.05 | 0.27
C | P Factors	0.08 | 0.87	0.08 | 0.87	0.08 | 0.00	0.15 | 0.92	0.15 | 0.92
RUSLE A	0.23	0.23	0.00	0.13	0.36
		Transport Risk Factors			
SED Value	2	2	2	2	2
Soil Permeability Class	Moderate	Moderate	Moderate	Moderate	Rapid
Field slope | Concave? | SR Factor	0.50 | No | 1.6	0.50 | No | 1.6	0.50 | No | 1.6	0.50 | No | 1.6	2.00 | No | 4.9
Soil Drainage Class	moderately well	moderately well	moderately well	well	excessively
HSG | Artificial Drainage? | SD Factor	A | No | 0.0	A | No | 0.0	A | No | 0.0	A | No | 0.0	A | No | 0.0
		Management Factors			
Distance to Water (DF)	200-349 ft | 0.6	< 100 ft | 1.0	200-349 ft | 0.6	350-500 ft | 0.4	100-199 ft | 0.8
Buffer Width & Type (BF)	> 50' veg. | 0.8	> 35' veg. | 0.9	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8
Soil Test P Fertility Index Value	175	178	175	346	265
Degree of P Saturation (DPS M3)	46.8 (est.)	47.4 (est.)	46.8 (est.)	75.9 (est.)	62.2 (est.)
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0
Org. P appl. rates, lb/A | OP * PSC	|228 | - | - | 114	|147 | - | - | 74	|228 | - | - | 137	|228 | - | - | 114	| 60 | - | - | 30
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Runoff Org. P appl. methods | AMr(o)	| M4 | - | - | 0.80	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Subsurface Org. P appl. methods | AMsub(o)	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80
P particulate | P runoff | P subsurface	17 | 14 | 0 |	32 | 18 | 0 |	17 | 11 | 0 |	22 | 10 | 0 |	34 | 43 | 0 |
P Loss Rating Score	31 (L)	50 (L)	28 (L)	32 (L)	77 (M)

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Calloway			Year	2016
	174 (prim)	175 (prim)	176 (prim)	168 (prim)	183 (prim)
Account ID	0000000000000000	0000000000000000	00000000000000	00000000000000	00000000000000
County	Wicomico	Wicomico	Wicomico	Wicomico	Wicomico
Tract or Farm ID	Phillips, Mike H	Phillips, Mike H	Phillips, Mike H	Phillips, M Home RT	Phillips, V Twilley
Field ID	MPH5	MPH6, 7	MPH8	MPR1, 4	VPT2
MUSYM	FgA	OtA	IeB	OtA	NsB
Area | Crop	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres
Organics					
R Factor	195	195	195	195	195
Adj. K Factor | LS Factor	0.26 | 0.10	0.35 | 0.10	0.05 | 0.27	0.35 | 0.10	0.40 | 0.10
C | P Factors	0.15 | 0.92	0.15 | 0.92	0.15 | 0.92	0.08 | 0.87	0.08 | 0.87
RUSLE A	0.70	0.94	0.36	0.48	0.54
		Transport Risk Factors			
SED Value	2	2	2	2	2
Soil Permeability Class	Moderate	Slow	Moderate	Slow	Slow
Field slope | Concave? | SR Factor	0.50 | No | 1.6	0.50 | No | 1.8	2.00 | No | 5.6	0.50 | No | 1.8	0.50 | No | 1.8
Soil Drainage Class	poorly	poorly	well	poorly	well
HSG | Artificial Drainage? | SD Factor	B/D | No | 0.0	C/D | No | 0.0	A | No | 0.0	C/D | No | 0.0	C | No | 0.0
		Management Factors			
Distance to Water (DF)	350-500 ft | 0.4	> 500 ft | 0.2	100-199 ft | 0.8	> 500 ft | 0.2	< 100 ft | 1.0
Buffer Width & Type (BF)	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8
Soil Test P Fertility Index Value	297	153	250	237	150
Degree of P Saturation (DPS M3)	67.6 (est.)	43.1 (est.)	59.6 (est.)	57.4 (est.)	42.5 (est.)
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0
Org. P appl. rates, lb/A | OP * PSC	|228 | - | - | 114	|228 | - | - | 114	| 60 | - | - | 30	|228 | - | - | 114	|228 | - | - | 114
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Runoff Org. P appl. methods | AMr(o)	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Subsurface Org. P appl. methods | AMsub(o)	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80
P particulate | P runoff | P subsurface	19 | 9 | 0 |	5 | 4 | 0 |	32 | 47 | 0 |	8 | 5 | 0 |	24 | 19 | 0 |
P Loss Rating Score	28 (L)	9 (L)	79 (M)	12 (L)	43 (L)

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Calloway			Year	2021
	179 (prim)	208 (prim)	209 (prim)	210 (prim)	277 (prim)
Account ID	0000000000000000	0000000000000	0000000000000	00000000000000	0000000000000000
County	Wicomico	Wicomico	Wicomico	Wicomico	Wicomico
Tract or Farm ID	Phillips, V Twilley	Spear	Spear	Spear	Twilley, Eric
Field ID	VPT3	SP1	SP2	SP4	ET1
MUSYM	MtA	RsB	RuB	RwB	RkA
Area | Crop	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres
Organics					
R Factor	195	195	195	195	195
Adj. K Factor | LS Factor	0.40 | 0.10	0.05 | 0.10	0.14 | 0.10	0.05 | 0.10	0.17 | 0.10
C | P Factors	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87
RUSLE A	0.54	0.07	0.19	0.07	0.23
		Transport Risk Factors			
SED Value	2	2	2	2	2
Soil Permeability Class	Slow	Rapid	Rapid	Rapid	Moderate
Field slope | Concave? | SR Factor	0.50 | No | 1.8	0.50 | No | 1.4	0.50 | No | 1.4	0.50 | No | 1.4	0.50 | No | 1.6
Soil Drainage Class	moderately well	excessively	excessively	excessively	moderately well
HSG | Artificial Drainage? | SD Factor	C | No | 0.0	A | No | 0.0	A | No | 0.0	A | No | 0.0	A | No | 0.0
		Management Factors			
Distance to Water (DF)	< 100 ft | 1.0	> 500 ft | 0.2	350-500 ft | 0.4	200-349 ft | 0.6	> 500 ft | 0.2
Buffer Width & Type (BF)	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8	> 50' veg. | 0.8
Soil Test P Fertility Index Value	219	265	220	236	197
Degree of P Saturation (DPS M3)	54.2 (est.)	62.2 (est.)	54.4 (est.)	57.2 (est.)	50.5 (est.)
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0
Org. P appl. rates, lb/A | OP * PSC	| 60 | - | - | 30	|228 | - | - | 114	|228 | - | - | 114	|224 | - | - | 112	|228 | - | - | 114
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Runoff Org. P appl. methods | AMr(o)	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Subsurface Org. P appl. methods | AMsub(o)	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80
P particulate | P runoff | P subsurface	35 | 17 | 0 |	8 | 4 | 0 |	14 | 7 | 0 |	23 | 11 | 0 |	6 | 4 | 0 |
P Loss Rating Score	52 (M)	12 (L)	21 (L)	33 (L)	10 (L)

UM Phosphorus Management Tool (PMT) Report

Farmer Name	Calloway			Year	2016
	113 (prim)	290 (prim)	291 (prim)	278 (prim)	185 (prim)
Account ID	00000000000000	0000000000000000	0000000000000000	0000000000000000	0000000000000000
County	Wicomico	Wicomico	Wicomico	Wicomico	Wicomico
Tract or Farm ID	Morgan	Woglhman	Woglhman	Twilley, Eric	Reynolds
Field ID	WM2	EP2	EP3	ET2	WR2
MUSYM	HnA	HvA	RsA	RkA	KgB
Area | Crop	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres	0.0 Acres
Organics					
R Factor	195	195	195	195	195
Adj. K Factor | LS Factor	0.08 | 0.10	0.14 | 0.10	0.05 | 0.10	0.17 | 0.10	0.12 | 0.17
C | P Factors	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87	0.08 | 0.87
RUSLE A	0.11	0.19	0.07	0.23	0.28
		Transport Risk Factors			
SED Value	2	2	2	2	2
Soil Permeability Class	Moderately Rapid	Moderate	Rapid	Moderate	Moderately Rapid
Field slope | Concave? | SR Factor	0.50 | No | 1.4	0.50 | No | 1.6	0.50 | No | 1.4	0.50 | No | 1.6	1.50 | No | 4.9
Soil Drainage Class	moderately well	poorly	excessively	moderately well	somewhat poorly
HSG | Artificial Drainage? | SD Factor	B | No | 0.0	A/D | No | 0.0	A | No | 0.0	A | No | 0.0	A/D | No | 0.0
		Management Factors			
Distance to Water (DF)	< 100 ft | 1.0	> 500 ft | 0.2	< 100 ft | 1.0	> 500 ft | 0.2	> 500 ft | 0.2
Buffer Width & Type (BF)	> 50' veg. | 0.8	> 50' veg. | 0.8	> 35' veg. | 0.9	> 50' veg. | 0.8	> 50' veg. | 0.8
Soil Test P Fertility Index Value	213	511	312	323	218
Degree of P Saturation (DPS M3)	53.3 (est.)	104.1 (est.)	70.2 (est.)	72.0 (est.)	54.0 (est.)
Fert. P appl. rates, lb/A | FP * PSC	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0	| - | - | - | 0
Org. P appl. rates, lb/A | OP * PSC	|101 | - | - | 51	|228 | - | - | 137	| 60 | - | - | 30	|228 | - | - | 114	|228 | - | - | 114
Runoff Fert. P appl. methods | AMr(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Runoff Org. P appl. methods | AMr(o)	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40	| M2 | - | - | 0.40
Subsurface Fert. P appl. methods | AMsub(f)	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00	| - | - | - | 0.00
Subsurface Org. P appl. methods | AMsub(o)	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80	| M4 | - | - | 0.80
P particulate | P runoff | P subsurface	34 | 14 | 0 |	16 | 7 | 0 |	56 | 19 | 0 |	10 | 5 | 0 |	7 | 12 | 0 |
P Loss Rating Score	48 (L)	23 (L)	75 (M)	15 (L)	19 (L)

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

		Spreadable		2025	2025	2025	2024	2023
Farm/Field	**Acres**	**Acres**	**RISK**	**P Applied**	**P Removed**	**P Balance**	**P Balance**	**P Balance**
Adkins Historical #3787-6115								
ADH1	9.4	9						
ADH2	8.3	8						
Adkins, Earnest #3705-6051								
EA2	7.4	7						
Adkins, Jimmy #311-1210								
JA1	16.4	16.4						
Ashcraft, Steve #153-1036								
AO1	16.3	16						
AO2	11.3	11		0	38	--	38	--
Ashton, Alfred #147-1030								
AA1	5.2	5						
AA2	5.7	5.7		0	38	--	38	--
AA3	1.3	1		0	38	--	38	--
AA4	4.1	4.1		0	38	--	38	--
AA5	7.3	7		0	38	--	38	--
Beazer East #1482-306								
BE1A	7.3	6						
BE1B	5.8	5						
BE3	18.6	18.6						
BE4	18.7	18.7						
BE5	9.4	9						
Burnett, King								
KB4	5.4	5						
KB6	1.8	1.8	L	48	60	83	95	78
KB10	3.7	3.7		48	60	83	95	78
Calloway, Denise #239-1128								
DC1	4.8	4.3						
Calloway, Tommy #2152-1020								
TC1	4.1	3.5						
TC2	14.1	14.1						

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

Farm/Field	Acres	Spreadable Acres	RISK	2025 P Applied	2025 P Removed	2025 P Balance	2024 P Balance	2023 P Balance
Catlin #209-1098								
CAT2	3.8	3.5						
CAT3+4	10.3	10	H	0	60	--	--	--
CAT5	16.7	15						
CAT6	3.9	3.5	M	60	60	--	--	32
CAT7	1.6	1						
CAT8	4	3.6	M	60	60	--	--	--
CAT9	7	7	M	60	60	--	--	--
CAT10	1.8	1.8		0	50	9	59	149
Dietz, Leonard #3785-6113								
LD1	9.5	9.5						
Dyer, Will #3738-6070								
WD1A	6.4	6						
WD1B	4.3	2.3		0	50	14	64	--
Edwards, John #3789-6117								
JE3	23.3	23.3		0	13	73	86	112
JE5	11	11		0	13	37	50	--
JE6	11.2	11		0	13	73	86	112
JE7+8	11.3	11		0	13	73	86	112
Eichelberger, Robert #1535-394								
RE1	8.5	8.5						
RE2	16.6	16.6						
Freed, Terry #241-2871								
GE1	16.2	16		0	50	--	50	--
Glasgow, Elizabeth #1577-450								
EG1	20.1	20		0	13	25	38	--
Green, Tracy #3109-1103								
TG1	6.2	5						
Hatton, Faye #229-1118								
FH1	4.2	4		0	50	24	74	112
FH2	2.4	2		0	50	24	74	112

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

		Spreadable		2025	2025	2025	2024	2023
Farm/Field	**Acres**	**Acres**	**RISK**	**P Applied**	**P Removed**	**P Balance**	**P Balance**	**P Balance**
Hensley, B #1481-305								
HN1	6	6		0	50	41	91	112
HN2	5.7	5.7		0	50	41	91	112
HN3	15.4	15.4						
Hochmoth, Bill #3138-5757								
BH1	5.4	4						
BH2	24.5	22		0	50	--	22	72
Hochmuth, Pat #3139-5758								
PH1	6.1	6.1						
PH2	30.6	30.4						
PH3	8.3	8.3						
PH4	21	21						
PH5A	8	8						
PH5B	48.4	48.4						
PH6	47	47						
Home #3527-395								
H1	16	15						
H2	25.8	25						
H3	10.8	10.8						
H4	24.5	24.5						
H5	2.3	2.3						
H7	6.2	6.2						
H8	6.3	6.3						
H9	13.1	13						
H11	15	15		0	50	--	10	--
H12	14.2	14.2						
H13	18.9	18						
H14	8.3	8						
H15	8.3	8						
H16	1	1						
H17	1.2	1						
H18	8.6	8						
H19	7.2	7						
Home, Bobby's #3596-1023								
B1	17	17						
B2	4.4	4		0	50	28	78	72

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

		Spreadable		2025	2025	2025	2024	2023
Farm/Field	**Acres**	**Acres**	**RISK**	**P Applied**	**P Removed**	**P Balance**	**P Balance**	**P Balance**
Home, Doug's #3527-5167								
HD2	12.4	12.4	L	143	60	83	--	--
HD5	1	1	L	143	60	83	--	--
HD6	10.2	10						
Home, Hunt Club #2263-1085								
HC1	30.7	29	M	101	104	--	--	--
HC2	39.8	39	H	0	104	--	--	--
Home, Lloyd #3527-2339								
HL1	6.1	6						
Home, Nan's #3527-1119								
N1	22.4	22.4		0	50	--	24	--
N2	4.4	4		0	50	--	24	--
N3	7.6	7.6		0	50	--	24	--
N4	12.2	12.2						
Home, Tank Farm #3527-1022								
HT1	7.4	7						
HT2	3.9	3.9						
HT3	18.7	18						
HT4	21.5	21.5						
Johnson-Upper Ferry #1484-308								
J1	12.7	12.7						
J2	9.9	9.9						
J3	1.7	1.7						
Kenny, David #1463-6332								
DK1	8	8		0	50	--	17	--
Moore, Pat #256-1145								
PM1+2	2.9	2.9						
PM3	13.5	13						
PM4	9.7	9						
Morgan, William #244-1133								
WM1	5.9	5.9						
WM2	10	10	L	101	60	81	40	78

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

Farm/Field	Acres	Spreadable Acres	RISK	2025 P Applied	2025 P Removed	2025 P Balance	2024 P Balance	2023 P Balance
Nashay, Frank								
FN1	9	9		101	60	98	57	107
FN2	5	5						
FN3	10.7	10.7						
Owens, Frances #2529-5377								
FO1	14.3	14.3						
FO2-3	5.6	5.6		0	38	--	38	--
FO4	6.4	6		0	38	--	38	--
Owens, Sally #154-1037								
AOM1	19.7	19.7						
AOM2	3.2	3.2		0	38	--	38	--
Palecheck, Bill #3227-1062								
PCB1	6.4	6						
PCB2	4.2	4						
PCB3	32.5	32						
PCB4	31.7	30						
PCB5	26.4	26.4						
PCB6	14.3	14.3						
Palecheck, Bill #3228-1797								
PC1	8.1	8						
PC2	3.6	3.6						
PC3	10.8	10.8						
PC5	13.3	13						
PC6	14	14						
PC7+9	7.2	7.2						
PC8	6.4	6						
PC10	10.8	10.8						
PC11	7.7	7.7						
PC12	4.8	4.8						
Palecheck, Bill - #3361-2579								
PCU1	10.6	10.6						
PCU2	26.4	26.4						
PCU3	31.7	31						
Phillips, Home #3738-6070								
BPH2A	10.1	10.1	M	60	60	--	--	--
BPH2B	15.7	15.7						

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

Farm/Field	Acres	Spreadable Acres	RISK	2025 P Applied	2025 P Removed	2025 P Balance	2024 P Balance	2023 P Balance
Phillips, B. - Tower #3738-883								
BPT1	43	38						
BPT2	30.9	30						
Phillips, G - Nutters #3737-240								
GPM1A	37.2	33.6	L	143	60	83	--	--
GPM1B	43.1	41.4	L	143	60	83	--	--
GPM2	3.2	3	L	143	60	83	--	--
GPM3	35.8	35.8				--	--	15
Phillips, G - Paige #3737-234								
GP1	11	10						
GP2	11.3	11		0	50	--	17	--
GP3	7	7		0	50	--	17	--
GP4	5.1	5		0	50	--	17	--
Phillips, M. - Home #3740-6069								
MPH1	22.8	22.8	L	0	60	39	99	149
MPH2	30	29	M	60	60	--	--	--
MPH5	20.6	20	L	0	60	39	99	149
MPH6+7	19.3	19.3	L	0	60	2	62	112
MPH8	15.7	15.7	M	60	60	--	--	--
Phillips, M. - Home Right #3740-6071								
MPR1+4	7.4	7	L	0	60	31	91	112
MPR2+3	7.5	7.5						
Phillips, M - Twilley #3741-242								
MGP1	9.1	9						
MGP2+3	5.3	5						
Phillips, V - Home #3739-6068								
VP1	26.6	26.6	M	60	60	--	--	--
VP2	31.9	31.9						
VP3+4	15	15						
VP5+6	19.6	19.6						
Phillips, V. - Rocka #3745-6016								
BPR1B	27.5	27.5		0	100	--	49	112
BPR1F	46.3	46.3		0	100	--	49	112
BPR2B	38.9	38.9		0	100	37	137	200
BPR2F	32.2	32.2						
Phillps, V - Twilley #3739-239								
VPT1+4	10	10						

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

		Spreadable		2025	2025	2025	2024	2023
Farm/Field	**Acres**	**Acres**	**RISK**	**P Applied**	**P Removed**	**P Balance**	**P Balance**	**P Balance**
VPT2	70	70	L	121	60	61	--	--
VPT3	9.4	9	M	60	60	--	--	--
Pilchard, Paige #1540-401								
PP1	10.1	10.1						
PP2	12.4	12.4						
PP3	11.7	11.7						
PP4	20.2	20.2						
PP5	26.4	26.4						
PP6	14.6	14.6						
PP7	6.8	6.8						
Reynolds, Will #1230-1013								
WR1	8.9	8.9		0	38	--	17	--
WR2	13.6	13.6	L	48	60	75	87	151
Saulsbury, Joby #3706-6052								
JS1	12.2	12						
JS3	6.5	6						
JS4	2.1	2						
Saulsbury, Sandra #3965-5601								
S1	13.4	13						
S2	4.3	4		0	50	14	64	--
S3	2.6	2		0	50	14	64	--
Schnoor, Fred								
FS1	16	16						
Sheman, Louise #1532-1532								
LS1	16.4	16.4						
Shiles, April #3242-1135								
AS2A	7.3	7.3		0	38	44	82	108
AS2B	5.9	5.9		0	38	44	82	108

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

Farm/Field	Acres	Spreadable Acres	RISK	2025 P Applied	2025 P Removed	2025 P Balance	2024 P Balance	2023 P Balance
Shockley #190-1075								
SH2	11.3	10.5						
SH3	1.5	1						
SH4+9	8.3	7.5						
SH5	3	3						
SH6	5.8	5		0	38	71	109	147
SH7	12.7	12						
SH8	2	2						
Spear #213-1102								
SP1	0.3	0.3	L	143	60	83	--	--
SP2	11	10	L	143	60	83	--	--
SP4	5.4	5.4	L	143	60	83	--	--
Todd #243-1132								
T1	11.5	10		0	13	5	18	108
T2	3.1	3						
Truitt, W. #251-1140								
TR1	8.8	8.8						
Twilley, Eric #4049-6384								
ET1	24	24	L	95	60	78	43	--
ET2	21.9	21.9	L	95	60	78	43	--
Wang, Henry #3528-1081								
HW5	19.2	17						
HW6	3	3						
HW7	7.6	7						
HW8	2.3	2						
HW9	13.1	12						
Webster, P #1510-353								
BR1	22	22		0	50	14	64	--
BR2	6.5	6						
BR3	3.7	3.7		0	50	14	64	--
BR4	7.3	7		0	50	14	64	--
BR5	3.4	3						

CALLOWAY BROTHERS
PHOSPHORUS REMOVAL

		Spreadable		2025	2025	2025	2024	2023
Farm/Field	**Acres**	**Acres**	**RISK**	**P Applied**	**P Removed**	**P Balance**	**P Balance**	**P Balance**
White, Taylor								
TW1	12.6	12.4						
TW2	4.7	4.6						
TW3	5.5	4.8		0	38	12	50	--
TW4	2.9	2.9		0	38	14	52	116
Wilson, Donald #263-1154								
DW1+2	8.4	8						
DW3	13.4	13						
DW4	5.9	5.9						
Wilson, S. #2396-5299								
LW1	7	6						
Woglhman, G. #149-1032								
EP1	23.2	23.1		81	60	104	83	147
EP2	19.7	18.9		0	60	23	83	147
EP3	39	38.8	M	60	60	83	83	147

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

IRRIGATED FIELD CORN

Hunt Club, Home

HC1	2.5 Tons per acre poultry manure (93-101-159)	Broadcast and incorporated

All Fields:

40-0-0-1.5 Zinc	Planter

20 lbs. of Sulfur and 1.0 lbs. of Boron should be added to sidedress Nitrogen.

Recommend a Presidedress Nitrogen Test be done prior to sidedress nitrogen application.

Estimated sidedress (allows for nitrogen credits from previously applied manure and 15 lbs per acre from last year's soybeans):

Hunt Club Home HC1: 103 lbs per acre

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN

Beazer, East		
BE1A	3 Tons per acre poultry manure	Broadcast and incorporated
BE1B	3 Tons per acre poultry manure	Broadcast and incorporated
BE3	3 Tons per acre poultry manure	Broadcast and incorporated
BE4	3 Tons per acre poultry manure	Broadcast and incorporated
BE5	3 Tons per acre poultry manure (85-228-210)	Broadcast and incorporated
Burnett, King		
KB4	3 Tons per acre poultry manure (128-143-226)	Broadcast and incorporated
KB6	1 Ton per acre poultry manure	Broadcast and incorporated
KB10	1 Ton per acre poultry manure (43-48-75) (0-0-50)	Broadcast and incorporated
Catlin		
CAT2	3 Tons per acre poultry manure	Broadcast and incorporated
CAT5	3 Tons per acre poultry manure (111-121-191)	Broadcast and incorporated
CAT6	1.5 Tons per acre poultry manure (56-60-95)	Broadcast and incorporated
CAT7	3 Tons per acre poultry manure (111-121-191)	Broadcast and incorporated
CAT8	1.5 Tons per acre poultry manure	Broadcast and incorporated
CAT9	1.5 Tons per acre poultry manure (56-60-95)	Broadcast and incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN (Continued)

Dietz, Leonard		
LD1	3 Tons per acre poultry manure (85-228-210)	Broadcast and incorporated
Home, Doug's		
HD2	3 Tons per acre poultry manure	Broadcast and incorporated
HD5	3 Tons per acre poultry manure	Broadcast and incorporated
HD6	3 Tons per acre poultry manure (128-143-226)	Broadcast and incorporated
Morgan, William		
WM1	3 Tons per acre poultry manure (123-152-229)	Broadcast and incorporated
WM2	2 Tons per acre poultry manure (82-101-152)	Broadcast and incorporated
Frank Nashay		
FN1	2 Tons per acre poultry manure (82-101-152)	Broadcast and incorporated
FN2	3 Tons per acre poultry manure	Broadcast and incorporated
FN3	3 Tons per acre poultry manure (123-152-229)	Broadcast and incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN (Continued)

Bill Palecheck - #3228-1797

PC1	3 Tons per acre poultry manure	Broadcast and incorporated
PC2	3 Tons per acre poultry manure	Broadcast and incorporated
PC3	3 Tons per acre poultry manure	Broadcast and incorporated
PC5	3 Tons per acre poultry manure	Broadcast and incorporated
PC6	3 Tons per acre poultry manure	Broadcast and incorporated
PC7+9	3 Tons per acre poultry manure	Broadcast and incorporated
PC8	3 Tons per acre poultry manure	Broadcast and incorporated
PC10	3 Tons per acre poultry manure	Broadcast and incorporated
PC11	3 Tons per acre poultry manure	Broadcast and incorporated
PC12	3 Tons per acre poultry manure (85-228-210)	Broadcast and incorporated

Bill Palecheck - #3361-2579

PCU1	3 Tons per acre poultry manure	Broadcast and incorporated
PCU2	3 Tons per acre poultry manure	Broadcast and incorporated
PCU3	3 Tons per acre poultry manure (123-152-229)	Broadcast and incorporated

Phillips, B-Home

BPH2A	1.5 Tons per acre poultry manure (56-60-96) (0-0-60)	Broadcast and incorporated

Phillips, G-Nutters

GPM1A	3 Tons per acre poultry manure	Broadcast and incorporated
GPM1B	3 Tons per acre poultry manure	Broadcast and incorporated
GPM2	3 Tons per acre poultry manure	Broadcast and incorporated
GPM3	3 Tons per acre poultry manure (128-143-226)	Broadcast and incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN (Continued)

Phillips, M-Home		
MPH2	1.5 Ton per acre poultry manure	Broadcast and incorporated
MPH8	1.5 Ton per acre poultry manure (56-60-95) (0-0-60)	Broadcast and incorporated
Phillips, M-Home Right		
MPR2+3	2.5 Tons per acre poultry manure (102-127-191)	Broadcast and incorporated
Phillips, M Twilley		
MGP1	3 Ton per acre poultry manure	Broadcast and incorporated
MGP2&3	3 Ton per acre poultry manure (123-152-229)	Broadcast and incorporated
Phillips, V-Home		
VP1	1.5 Tons per acre poultry manure (56-60-95) (0-0-50)	Broadcast and incorporated
Phillips, V-Twilley		
VPT1+4	3 Tons per acre poultry manure	Broadcast and incorporated
VPT2	3 Tons per acre poultry manure (111-121-191)	Broadcast and incorporated
VPT3	1.5 Tons per acre poultry manure (56-60-95) (0-0-30)	Broadcast and incorporated
Reynolds, Will		
WR2	1 Tons per acre poultry manure (43-48-75) (0-0-70)	Broadcast and incorporated
Spear		
SP1	3 Tons per acre poultry manure	Broadcast and incorporated
SP2	3 Tons per acre poultry manure	Broadcast and incorporated
SP4	3 Tons per acre poultry manure (128-143-226)	Broadcast and incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN (Continued)

Twilley, Eric		
ET1	2 Tons per acre poultry manure	Broadcast and incorporated
ET2	2 Tons per acre poultry manure (86-95-150)	Broadcast and incorporated
Wilson, Donald		
DW1&2	3 Tons per acre poultry manure	Broadcast and incorporated
DW2	3 Tons per acre poultry manure	Broadcast and incorporated
DW2	3 Tons per acre poultry manure (123-152-229)	Broadcast and incorporated
Woglhman, George		
EP1	2 Tons per acre poultry manure (74-81-127)	Broadcast and incorporated
EP3	1.5 Tons per acre poultry manure (56-60-95) (0-0-50)	Broadcast and incorporated

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN (Continued)

Burnett, King KB4, Home, Doug's All,
Morgan, William WM1, Frank Nashay FN2, FN3
Bill Palecheck - #3361-2579 All,
Phillips, G-Nutters All, Phillips, M-Home Right All
Phillips, M Twilley All, Phillips,
V-Twilley VPT1&4, VPT2, Spear All,
Wilson, Donald All:

	0-0-0-1.5 zinc	Planter

All Other Fields:

	40-0-0-1.5 zinc	Planter

15 lbs. of Sulfur and 0.75 lbs. of Boron should be added to sidedress Nitrogen.

Recommend a Presidedress Nitrogen Test be done prior to sidedress nitrogen application.

Estimated sidedress (allows for nitrogen credits from previously applied manure and 15 lbs per acre from last year's soybeans):

Beazer, East BE1A:	8 lbs per acre
All Other Fields:	11 lbs per acre
Burnett, King KB4:	9 lbs per acre
KB6,10:	54 lbs per acre
Catlin CAT2, 5, 7:	5 lbs per acre
CAT 6:	60 lbs per acre
CAT 8, 9:	62 lbs per acre
Dietz All:	12 lbs per acre
Home, Dougs All:	17 lbs per acre
Morgan, William WM1:	37 lbs per acre
WM2:	38 lbs per acre
Nashay, Frank FN1:	38 lbs per acre
FN2, 3:	37 lbs per acre
Bill Palecheck - #3228-1797 All:	35 lbs per acre

CALLOWAY BROTHERS
2025 RECOMMENDATIONS ADJUSTED FOR MANURE

DRY LAND FIELD CORN (Continued)

Recommend a Presidedress Nitrogen Test be done prior to sidedress nitrogen application.

Estimated sidedress (allows for nitrogen credits from previously applied manure and 15 lbs per acre from last year's soybeans):

Bill Palecheck - #3361-2579 All:	37 lbs per acre
Phillips, B-Home All:	35 lbs per acre
Phillips, G Nutters GPM1A:	28 lbs per acre
GPM1B, 3:	13 lbs per acre
GPM2:	15 lbs per acre
Phillips, M-Home MPH2:	45 lbs per acre
MPH8:	43 lbs per acre
Phillips, M-Home Right:	4 lbs per acre
Phillips, M-Twilley All:	14 lbs per acre
Phillips, V-Home:	49 lbs per acre
Phillips, V-Twilley VPT1+4:	26 lbs per acre
VPT2:	37 lbs per acre
VPT3:	52 lbs per acre
Reynolds, Will:	73 lbs per acre
Spear:	32 lbs per acre
Eric Twilley:	34 lbs per acre
Wilson, Donald:	33 lbs per acre
Woglhman, George EP1:	42 lbs per acre
EP3:	60 lbs per acre

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Adkins Historical #3787-6115								
ADH1	24.9	23.0	--	--	--	--	--	--
ADH2	28.2	28.1	--	--	12	1.5	--	--
Adkins, Earnest #3705-6051								
EA2	7.4	7.0	--	--	4	--	--	2
						--		
Adkins, Jimmy #311-1210								
JA1	16.4	16.4	--	--	12	1	--	2
Ashcraft, Steve #153-1036								
AO1	16.3	16.0	--	--	24	2.5	--	2
AO2	11.3	11.0	--	--	27	3	--	2
Ashton, Alfred #147-1030								
AA1	5.2	5.0	--	--	23	3	--	--
AA2	5.7	5.7	--	--	23	3	--	--
AA3	1.3	1.0	--	--	23	3	--	--
AA4	4.1	4.1	--	--	23	3	--	--
AA5	7.9	7.0	--	--	23	3	--	--
Beazer East #1482-306								
BE1A	7.3	6.0	3	18	27	3	--	2
BE1B	5.8	5.0	3	15	24	2.5	--	2
BE3	18.6	18.6	3	56	24	2.5	--	2
BE4	18.7	18.7	3	56	24	2.5	--	2
BE5	9.4	9.0	3	27	24	2.5	--	2
Burnett, King #3039-5746								
KB4	5.4	5.0	3	15	23	3	--	--
KB6	1.8	1.8	1	2	23	3	--	--
KB10	3.7	3.7	1	4	23	3	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	Acres	Acres	Tons/Acre	Total Tons	N credits	Tons/Acre	Tons/Acre	Tons/Acre
Calloway, Tommy #2152-1020								
TC1	4.1	3.5	--	--	18	1.5	1	1
TC2	14.1	14.1	--	--	18	1.5	1	1
Catlin #209-1098								
CAT2	3.8	3.5	3	11	4	--	--	2
CAT3+4	10.3	10.0	--	--	--	--	--	--
CAT5	16.7	15.0	3	45	4	--	--	2
CAT6	3.9	3.5	1.5	5	4	--	--	2
CAT7	1.6	1.0	3	3	4	--	--	2
CAT8	4.0	3.6	1.5	5	2	--	--	1
CAT9	7.0	7.0	1.5	11	2	--	--	1
CAT10	1.8	1.8	--	--	4	--	--	2
Dietz, Leonard #3785-6113								
LD1	9.5	9.5	3	29	23	3	--	--
Dyer, Will #4041-6466								
WD1A	6.4	6.0	--	--	--	--	--	--
WD1B	4.3	2.3	--	--	23	3	--	--
Edwards, John #3789-6117								
JE3	23.3	23.3	--	--	8	1	--	--
JE5	11.0	11.0	--	--	23	3	--	--
JE6	11.2	11.0	--	--	8	1	--	--
JE7+8	11.3	11.0	--	--	8	1	--	--
Eichelberger, Robert #1535-394								
RE1	8.5	8.5	--	--	24	1.5	3	--
RE2	16.6	16.6	--	--	--	--	--	--
Freed, Terry #241-2871								
GE1	16.2	16.0	--	--	35	3	3	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Glasgow, Elizabeth #1577-450								
EG1	20.1	20.0	--	--	27	3	--	2
Hales Collins #3217-6119								
HBC1	44.9		--	--	--	--	--	--
HBC2	62.1		--	--	--	--	--	--
Hales Glasgow #3288-5797								
HG1	22.4		--	--	--	--	--	--
Hales Hotten #868-1797								
HH1	33.2		--	--	--	--	--	--
Hales Jenkins Terrapin #3214-1879								
HJT1	18.3		--	--	--	--	--	--
HJT2	15.7		--	--	--	--	--	--
Hales Jenkins Warwick #3214-1878								
HJ1	19.6		--	--	--	--	--	--
HJ2	47.6		--	--	--	--	--	--
Hales Luffman #756-1695								
HWL1	42.1		--	--	--	--	--	--
Hales Packing Shed #1624-485								
HPS1	11.4		--	--	--	--	--	--
HPS2	25.3		--	--	--	--	--	--
Hales Packing Shed (Left) #3216-1662								
HPL	10.3		--	--	--	--	--	--
Hales Packing Shed (Right) #3216-1661								
HPR	11.4		--	--	--	--	--	--
Hales Phillips, B. #2778-810								
HP1	36.7		--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Hales Pusey, Elton #1626-930								
HEP1	46.3		--	--	--	--	--	--
Hales Tom Hall #1995-5094								
HTH1	38.1		--	--	--	--	--	--
Hales MaloneAG #4007-6312 + #4174-6498								
HM1	6.0		--	--	--	--	--	--
HM2	6.1		--	--	--	--	--	--
Hales Walmart #728-1554								
HWM1	24.6		--	--	--	--	--	--
HWM2	39.5		--	--	--	--	--	--
Hales Poly Walston #1610-473								
HPW1	42.5		--	--	--	--	--	--
Hatton, Faye #229-1118								
FH1	4.2	4.0	--	--	--	--	--	--
FH2	2.4	2.0	--	--	--	--	--	--
Hensley, B #1481-305								
HN1	6.0	6.0	--	--	20	1	3	--
HN2	5.7	5.7	--	--	20	1	3	--
HN3	15.4	15.4	--	--	32	2.5	3	--
Hochmoth, Bill #3138-5757								
BH1	5.4	4.0	--	--	--	--	--	--
BH2	24.5	22.0	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Hochmuth, Pat #3139-5758								
PH1	6.1	6.1	--	--	--	--	--	--
PH2	30.6	30.4	--	--	--	--	--	--
PH3	8.3	8.3	--	--	--	--	--	--
PH4	21.0	21.0	--	--	--	--	--	--
PH5A	8.0	8.0	--	--	--	--	--	--
PH5B	48.4	48.4	--	--	--	--	--	--
PH6	47.7	47.0	--	--	--	--	--	--
Home #3527-395								
H1	16.0	15.0	--	--	--	--	--	--
H2	25.8	25.0	--	--	12	1.5	--	--
H3	10.8	10.8	--	--	20	2.5	--	--
H4	24.5	24.5	--	--	--	--	--	--
H5	2.3	2.3	--	--	--	--	--	--
H7	6.2	6.2	--	--	--	--	--	--
H8	6.3	6.3	--	--	--	--	--	--
H9	13.1	13.0	--	--	--	--	--	--
H11	15.0	15.0	--	--	23	3	--	--
H12	14.2	14.2	--	--	--	--	--	--
H13	18.9	18.0	--	--	--	--	--	--
H14	8.3	8.0	--	--	--	--	--	--
H15	8.3	8.0	--	--	--	--	--	--
H16	1.0	1.0	--	--	--	--	--	--
H17	1.2	1.0	--	--	--	--	--	--
H18	8.6	8.0	--	--	--	--	--	--
H19	7.2	7.0	--	--	--	--	--	--
Home, Bobby and Mary #3596-1023/1024								
B1	17.0	17.0	--	--	--	--	--	--
B2	4.4	4.0	--	--	23	3	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

Farm/Field	Acres	Spreadable Acres	2025 Tons/Acre	2025 Total Tons	22,23,24 N credits	2024 Tons/Acre	2023 Tons/Acre	2022 Tons/Acre
Home, Doug's #3527-5167								
HD2	12.4	12.4	3	37	--	--	--	--
HD5	1.0	1.0	3	3	--	--	--	--
HD6	10.2	10.0	3	30	--	--	--	--
Home, Hunt Club #2263-1085								
HC1	30.7	29.0	2.5	73	24	2.5	2	--
HC2	39.8	39.0	--	--	4	--	2	--
Home, Lloyd #3527-2339								
HL1	6.1	6.0	--	--	--	--	--	--
Home, Nan's #3527-1119								
N1	22.4	22.4	--	--	23	3	--	--
N2	4.4	4.0	--	--	23	3	--	--
N3	7.6	7.6	--	--	23	3	--	--
N4	12.2	12.2	--	--	23	3	--	--
Home, Tank Farm #3527-1022								
HT1	7.4	7.0	--	--	--	--	--	--
HT2	3.9	3.9	--	--	--	--	--	--
HT3	18.7	18.0	--	--	--	--	--	--
HT4	21.5	21.5	--	--	--	--	--	--
	51.5	50.4						
Johnson-Upper Ferry #1484-308								
J1	12.7	12.7	--	--	31	3	1	2
J2	9.9	9.9	--	--	31	3	1	2
Kenny, David #1463-6332								
DK1	8.0	8.0	--	--	27	3	--	2

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Moore, Pat #256-1145								
PM1+2	2.9	2.9	--	--	--	--	--	--
PM3	13.5	13.0	--	--	12	1.5	--	--
PM4	9.7	9.0	--	--	--	--	--	--
Morgan, William #244-1133								
WM1	5.9	5.9	3	18	--	--	--	--
WM2	10.0	10.0	2	20	--	--	--	--
Nashay, Frank #257-1146 + #3041-5748								
FN1	9.0	9.0	2	18	--	--	--	--
FN2	5.0	5.0	3	15	--	--	--	--
FN3	10.7	10.7	3	32	--	--	--	--
Owens, Frances #2529-5377								
FO1	14.3	14.3	--	--	24	2.5	--	2
FO2-3	5.6	5.6	--	--	27	3	--	2
FO4	6.4	6.0	--	--	27	3	--	2
Owens, Sally #154-1037								
AOM1	19.7	19.7	--	--	24	2.5	--	2
AOM2	3.2	3.2	--	--	27	3	--	2
Palecheck, Bill #3227-1062								
DBP1	32.5	32.0	--	--	--	--	--	--
DBP2	31.7	30.0	--	--	--	--	--	--
DBP3	10.6	10.0	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

Farm/Field	Acres	Spreadable Acres	2025 Tons/Acre	2025 Total Tons	22,23,24 N credits	2024 Tons/Acre	2023 Tons/Acre	2022 Tons/Acre
Palecheck, Bill #3228-1797								
PC1	8.1	8.0	3	24	--	--	--	--
PC2	3.6	3.6	3	11	--	--	--	--
PC3	10.8	10.8	3	32	--	--	--	--
PC5	13.3	13.0	3	39	--	--	--	--
PC6	14.0	14.0	3	42	--	--	--	--
PC7+9	7.2	7.2	3	22	--	--	--	--
PC8	6.4	6.0	3	18	--	--	--	--
PC10	10.8	10.8	3	32	--	--	--	--
PC11	7.7	7.7	3	23	--	--	--	--
PC12	4.8	4.8	3	14	--	--	--	--
Palecheck, Bill - #3361-2579								
PCU1	10.6	10.6	3	32	--	--	--	--
PCU2	26.4	26.4	3	79	--	--	--	--
PCU3	31.7	31.0	3	93	--	--	--	--
Phillips, B-Home #3738-6070								
BPH2A	10.1	10.1	1.5	15	14	1.5	--	1
BPH2B	15.7	15.7	1.5	24	14	1.5	--	1
Phillips, B. - Tower #3738-883								
BPT1A	10.7	10.7	--	--	25	3	--	1
BPT1B	32.9	32.9	--	--	25	3	--	1
BPT2	30.9	30.0	--	--	27	3	--	2
Phillips, G - Nutters #3737-240								
GPM1A	37.2	33.6	3	101	4	--	--	2
GPM1B	43.1	41.4	3	124	4	--	--	3
GPM2	3.2	3.0	3	9	2	--	--	1
GPM3	35.8	35.8	3	107	4	--	--	2

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	Acres	Acres	Tons/Acre	Total Tons	N credits	Tons/Acre	Tons/Acre	Tons/Acre
Phillips, G - Paige #3737-234								
GP1	11.0	10.0	--	--	23	3	--	--
GP2	11.3	11.0	--	--	23	3	--	--
GP3	7.0	7.0	--	--	23	3	--	--
GP4	5.1	5.0	--	--	23	3	--	--
Phillips, M. - Home #3740-6069								
MPH1	22.8	22.8	--	--	16	--	3	2
MPH2	30.0	29.0	1.5	44	4	--	1	--
MPH5	20.6	20.0	--	--	16	--	3	2
MPH6+7	19.3	19.3	--	--	16	--	3	2
MPH8	15.7	15.7	1.5	24	6	--	1	1
Phillips, M. - Home Right #3740-6071								
MPR1+4	7.4	7.0	--	--	24	1	3	2
MPR2+3	7.5	7.5	3	23	39	3	3	2
Phillips, M - Twilley #3741-242								
MGP1	9.1	9.0	3	27	23	3	--	--
MGP2+3	5.3	5.0	3	15	23	3	--	--
Phillips, V - Home #3739-6068								
VP1	26.6	26.6	1.5	40	--	--	--	--
VP2	31.9	31.9	--	--	--	--	--	--
VP3+4	15.0	15.0	--	--	--	--	--	--
VP5+6	19.6	19.6	--	--	--	--	--	--
Phillips, V. - RockaWalkin #3745-6016								
BPR1B	27.5	27.5	--	--	12	--	3	--
BPR1F	46.3	46.3	--	--	12	--	3	--
BPR2B	38.9	38.9	--	--	18	--	3	3
BPR2F	32.2	32.2	--	--	--	--	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
Phillips, V - Twilley #3739-239								
VPT1+4	10.0	10.0	3	30	23	3	--	--
VPT2	70.0	70.0	3	210	12	1.5	--	--
VPT3	9.4	9.0	1.5	14	12	1.5	--	--
Pilchard, Paige #1540-401								
PPA1	42.0	42.0	--	--	23	3	--	--
PPA2	19.2	19.2	--	--	23	3	--	--
PPA3	41.0	41.0	--	--	23	3	--	--
Reynolds, Will #1230-1013								
WR1	8.9	8.9	--	--	27	3	--	2
WR2	13.6	13.6	1	14	4	--	--	2
Saulsbury, Joby #3706-6052								
JS1	12.2	12.0	--	--	4	--	--	2
JS3	6.5	6.0	--	--	4	--	--	2
JS4	2.1	2.0	--	--	4	--	--	2
Saulsbury, Sandra #3965-5601								
S1	13.4	13.0	--	--	--	--	--	--
S2	4.3	4.0	--	--	23	3	--	--
S3	2.6	2.0	--	--	23	3	--	--
Sheman, Louise #1532-1532								
LS1	16.4	16.4	--	--	4	--	--	2
Shiles, April #3242-1135								
AS2A	7.3	7.3	--	--	--	--	--	--
AS2B	5.9	5.9	--	--	--	--	--	--

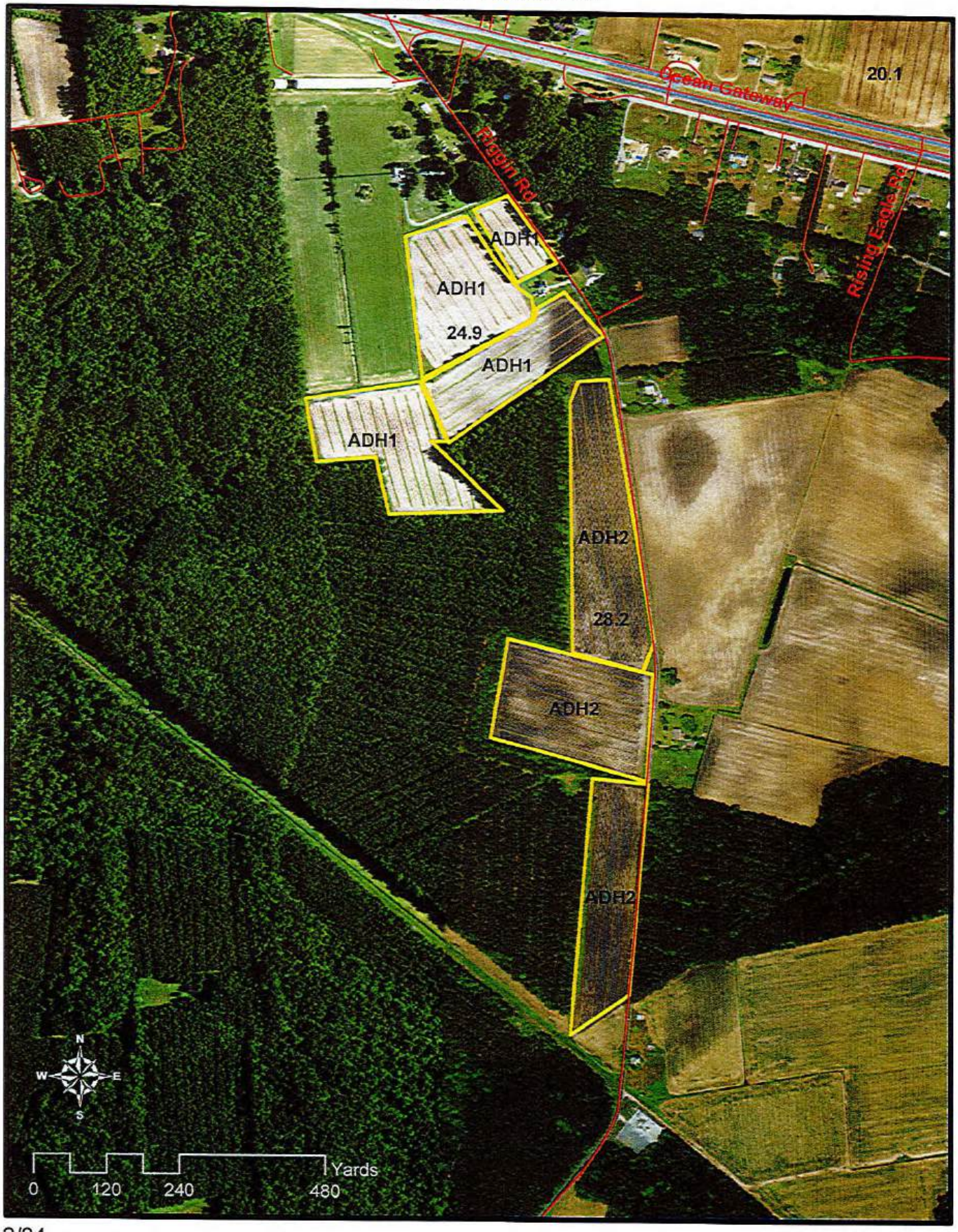
CALLOWAY BROTHERS
MANURE APPLICATIONS

Farm/Field	Acres	Spreadable Acres	2025 Tons/Acre	2025 Total Tons	22,23,24 N credits	2024 Tons/Acre	2023 Tons/Acre	2022 Tons/Acre
Shockley #190-1075								
SH2	11.3	10.5	--	--	27	3	--	2
SH3	1.5	1.0	--	--	12	1	--	2
SH4+9	8.3	7.5	--	--	27	3	--	2
SH5	3.0	3.0	--	--	27	3	--	2
SH6	5.8	5.0	--	--	4	--	--	2
SH7	12.7	12.0	--	--	27	3	--	2
SH8	2.0	2.0	--	--	27	3	--	2
Spear #213-1102								
SP1	0.3	0.3	3	1	--	--	--	--
SP2	11.0	10.0	3	30	--	--	--	--
SP4	5.4	5.4	3	16	--	--	--	--
Todd #243-1132								
T1	11.5	10.0	--	--	--	--	--	--
T2	3.1	3.0	--	--	--	--	--	--
Twilley, Eric #4049-6084								
ET1	24.0	24.0	2	48	--	--	--	2
ET2	21.9	21.9	2	44	--	--	--	2
Wang, Henry #3528-1081								
HW1	32.1	29.0	--	--	4	--	--	2
HW2	13.1	12.0	--	--	4	--	--	2
Webster, Phyllis #1510-353								
BR1	22.0	22.0	--	--	23	3	--	--
BR2	6.5	6.0	--	--	--	--	--	--
BR3	3.7	3.7	--	--	23	3	--	--
BR4	7.3	7.0	--	--	23	3	--	--
BR5	3.4	3.0	--	--	23	3	--	--

CALLOWAY BROTHERS
MANURE APPLICATIONS

		Spreadable	2025	2025	22,23,24	2024	2023	2022
Farm/Field	**Acres**	**Acres**	**Tons/Acre**	**Total Tons**	**N credits**	**Tons/Acre**	**Tons/Acre**	**Tons/Acre**
White, Taylor #437-1327								
TW1	12.6	12.4	--	--	35	3	3	--
TW2	4.7	4.6	--	--	35	3	3	--
TW3	5.5	4.8	--	--	35	3	3	--
TW4	2.9	2.9	--	--	12	--	3	--
Wilson, Donald #263-1154								
DW1+2	8.4	8.0	3	24	4	--	--	2
DW3	13.4	13.0	3	39	4	--	--	2
DW4	5.9	5.9	3	18	4	--	--	2
Wilson, S. #2396-5299								
LW1	7.0	6.0	--	--	--	--	--	--
Woglhman, G. #149-1032								
EP1	23.2	23.1	2	46	4	--	--	2
EP2	19.7	18.9	--	--	4	--	--	2
EP3	39.0	38.8	1.5	58	4	--	--	2
				2150	**Total Tons Poultry Manure**			

Calloway Brothers
Adkins Historical



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McConnell Agronomics

Calloway Brothers
Earnest Adkins, Alfred Ashton, Will Reynolds, Joby Saulsbury, & George Woglhman

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McConnell Agronomics

Calloway Brothers
Jimmy Adkins, Elizabeth Glasgow & David Kenny

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McConnell Agronomics

Calloway Brothers
Steve Ashcraft, Sally & Frances Owens

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McConnell Agronomics

Calloway Brothers
Beazer East

3/24

McConnell Agronomics

Calloway Brothers
King Burnett

2/21

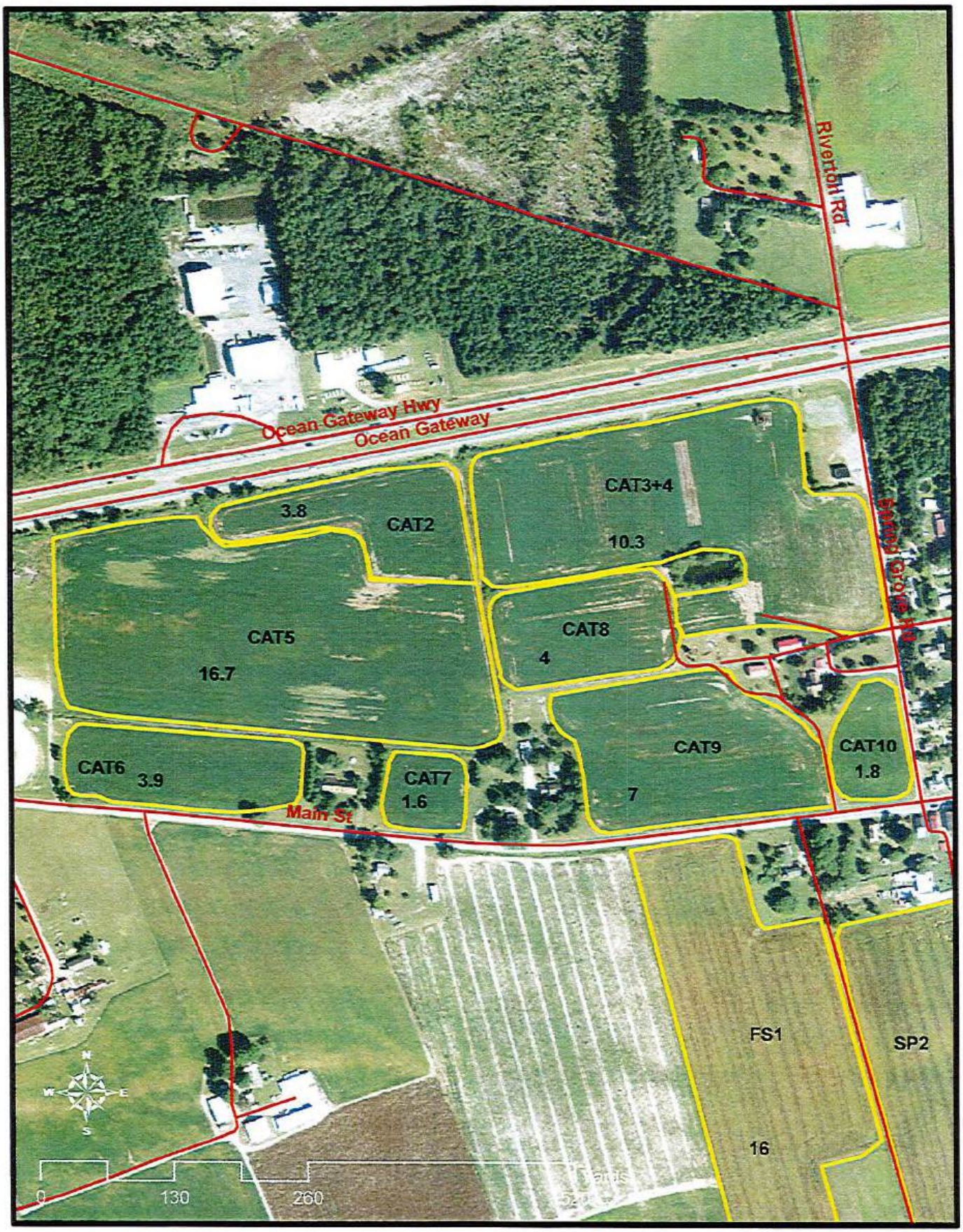
McConnell Agronomics

Calloway Brothers
Tommy Calloway

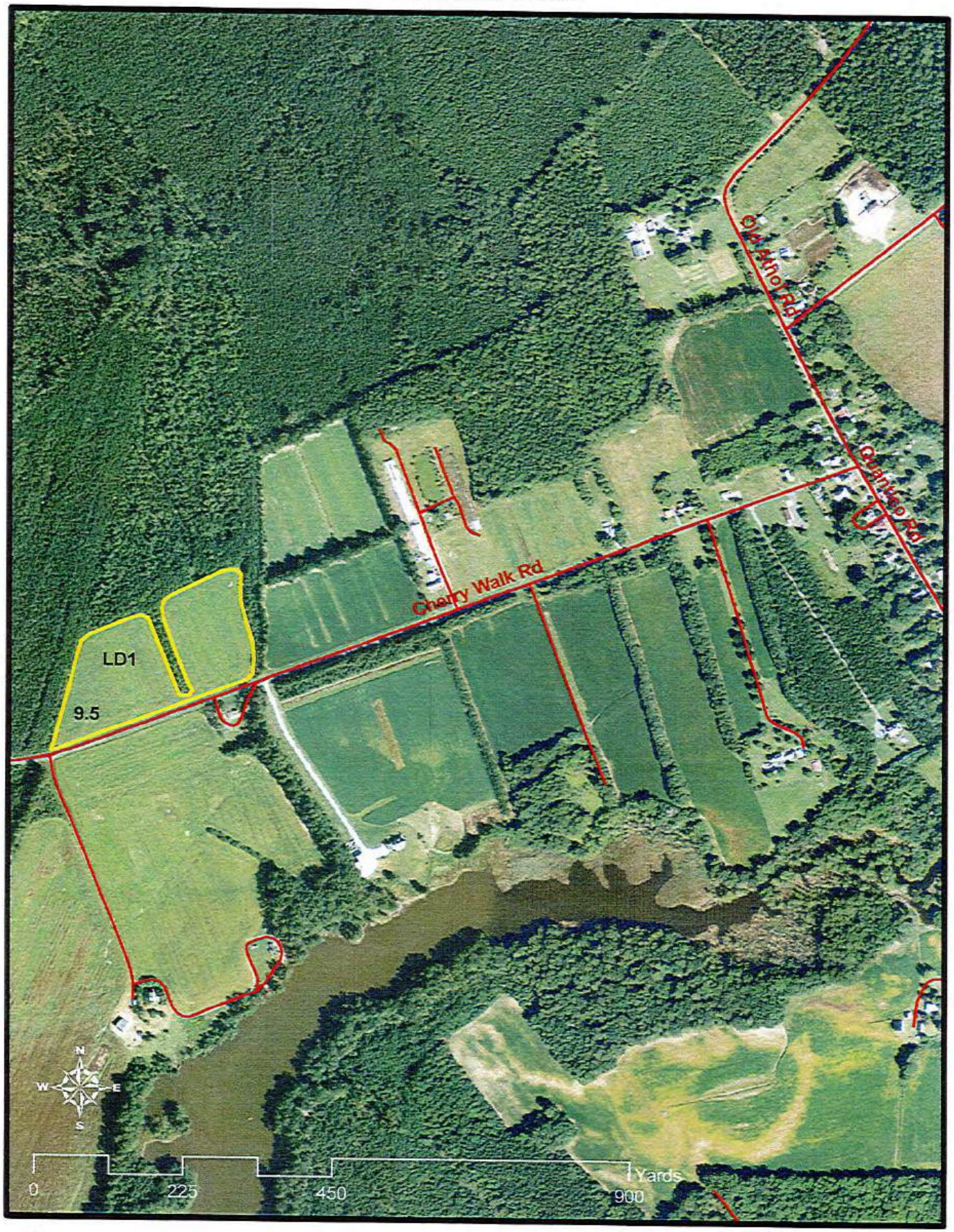
3/24

McConnell Agronomics

Calloway Brothers
Catlin



Calloway Brothers
Leonard Dietz



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McConnell Agronomics

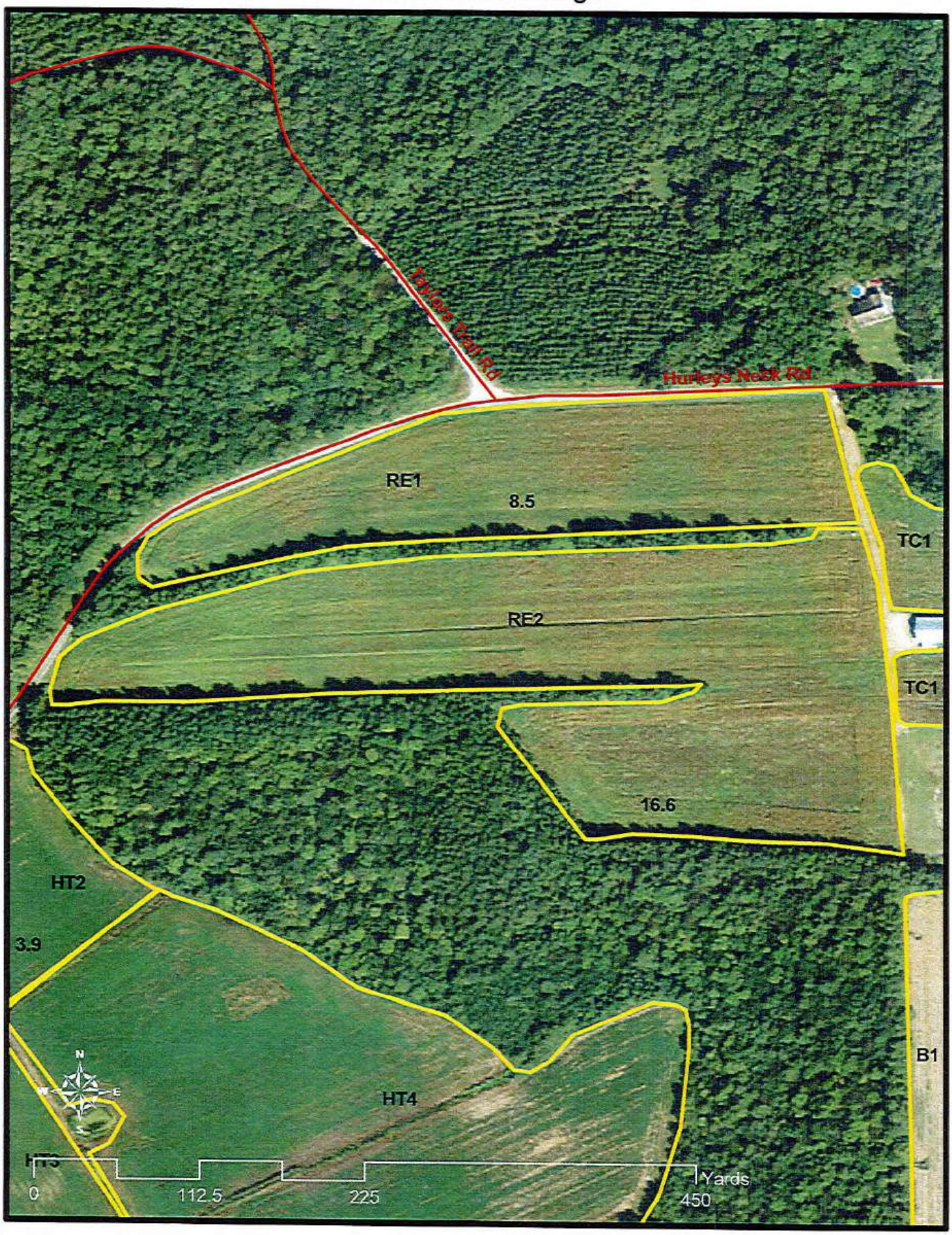
Calloway Brothers
Will Dyer, Phillips Home, Across from Home & Tower

3/24

McConnell Agronomics

Calloway Brothers
John Edwards

Calloway Brothers
Robert Eichelberger



McConnell Agronomics

Calloway Brothers
Terry Freed

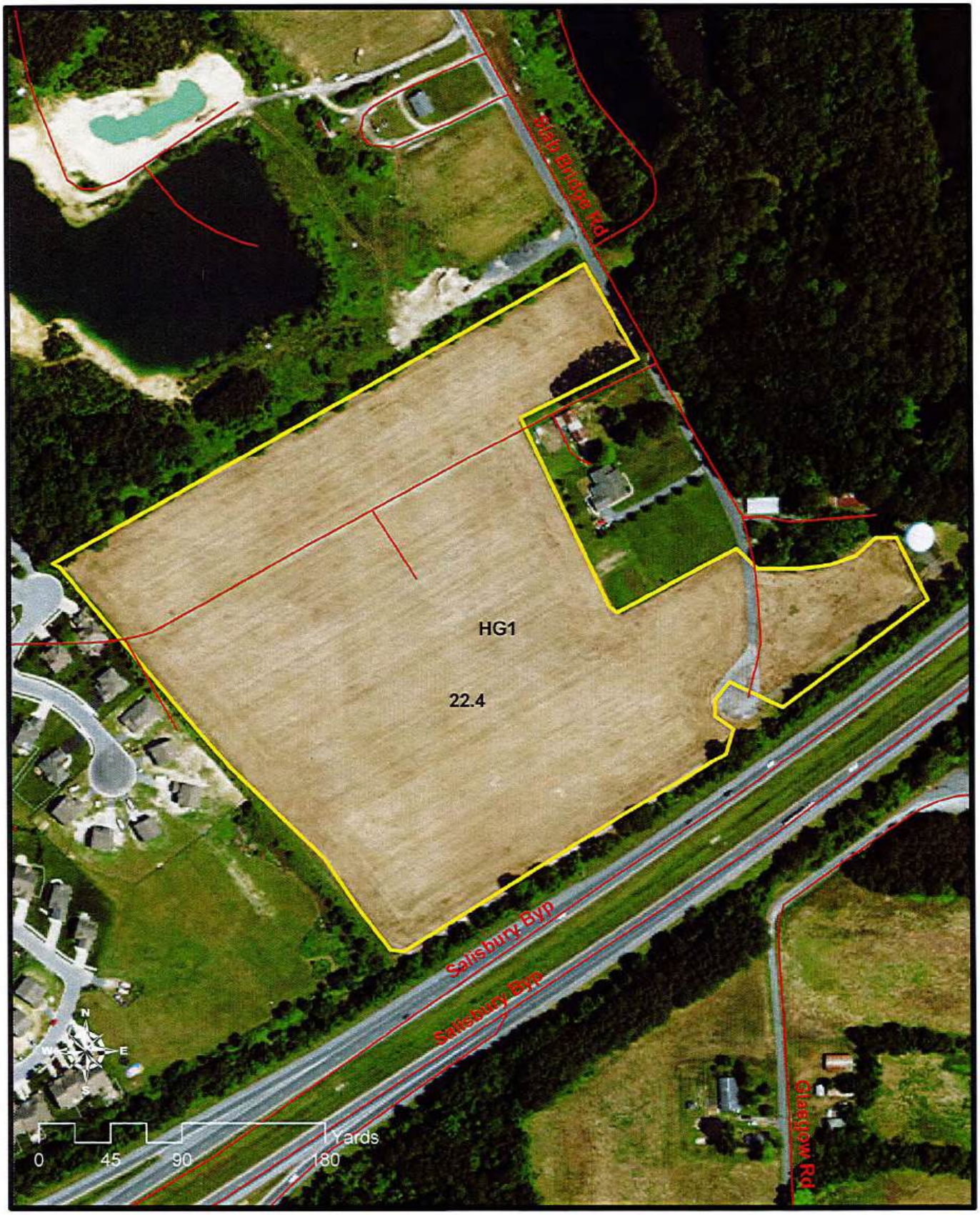
McConnell Agronomics

Calloway Brothers
Tracy Green, Fred Schnoor, & Spear

McConnell Agronomics

Calloway Brothers
Hales Collins #3217-6119

Calloway Brothers
Hales Glasgow #3288-5797



Calloway Brothers
Hales Hotten #868-1797

Calloway Brothers
Hales Phillips #2778-810

3/25

McConnell Agronomics

Calloway Brothers
Hales Jenkins Terrapin #3214-1879

Calloway Brothers
Hales Jenkins Warwick #3214-1878

3/25

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Calloway Brothers
Hales Luffman #756-1695

3/25

McConnell Agronomics

Calloway Brothers
Hales Packing Shed #1624-485

Calloway Brothers
Hales Packing Shed Left #3216-1662

Calloway Brothers
Hales Elton Pusey #1626-930

Calloway Brothers
Hales Tom Hall #1995-5094

Calloway Brothers
Hales MaloneAG #4174-6498 + #4173-6499

Calloway Brothers
Hales Poly Walston #1610-473

3/25

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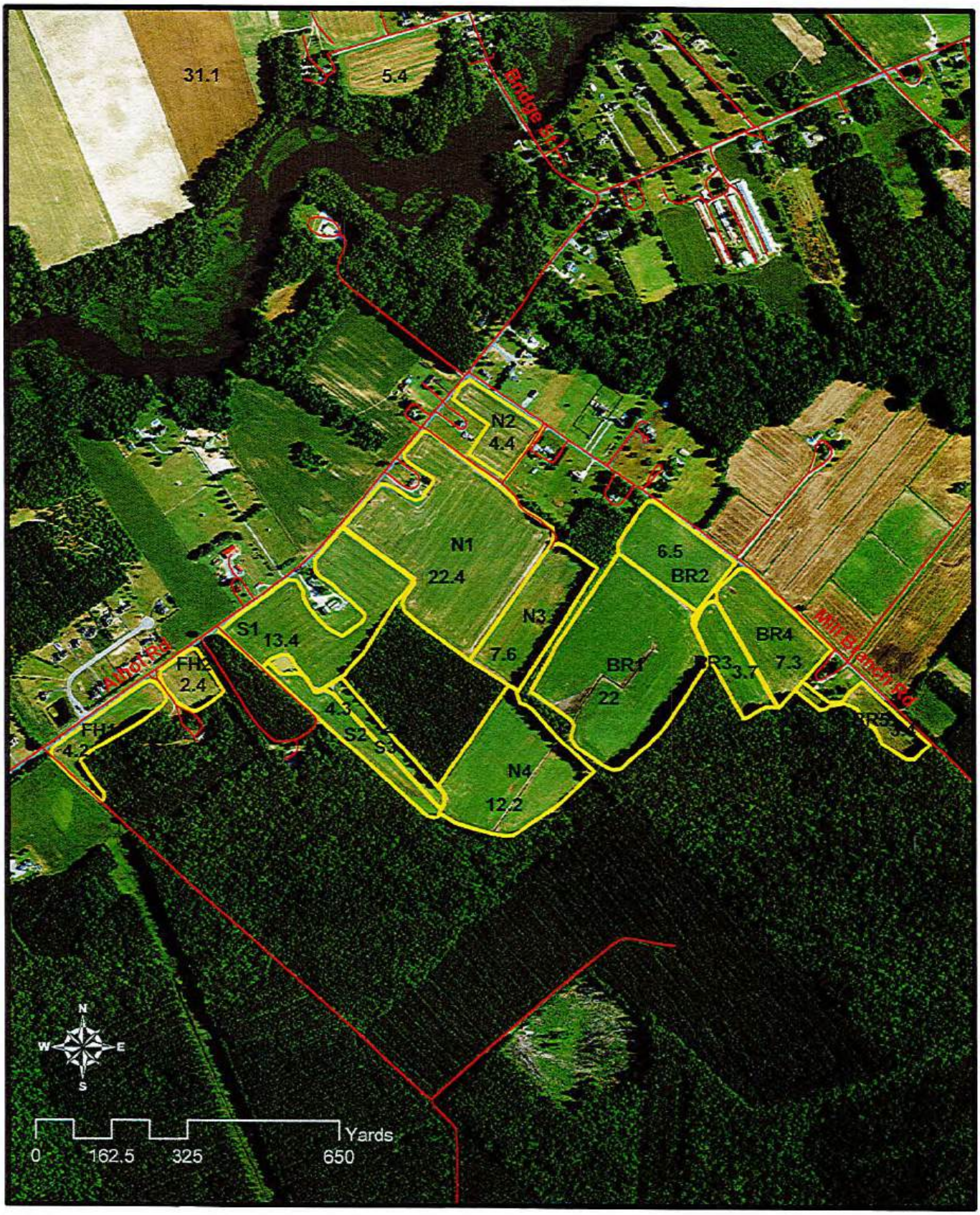
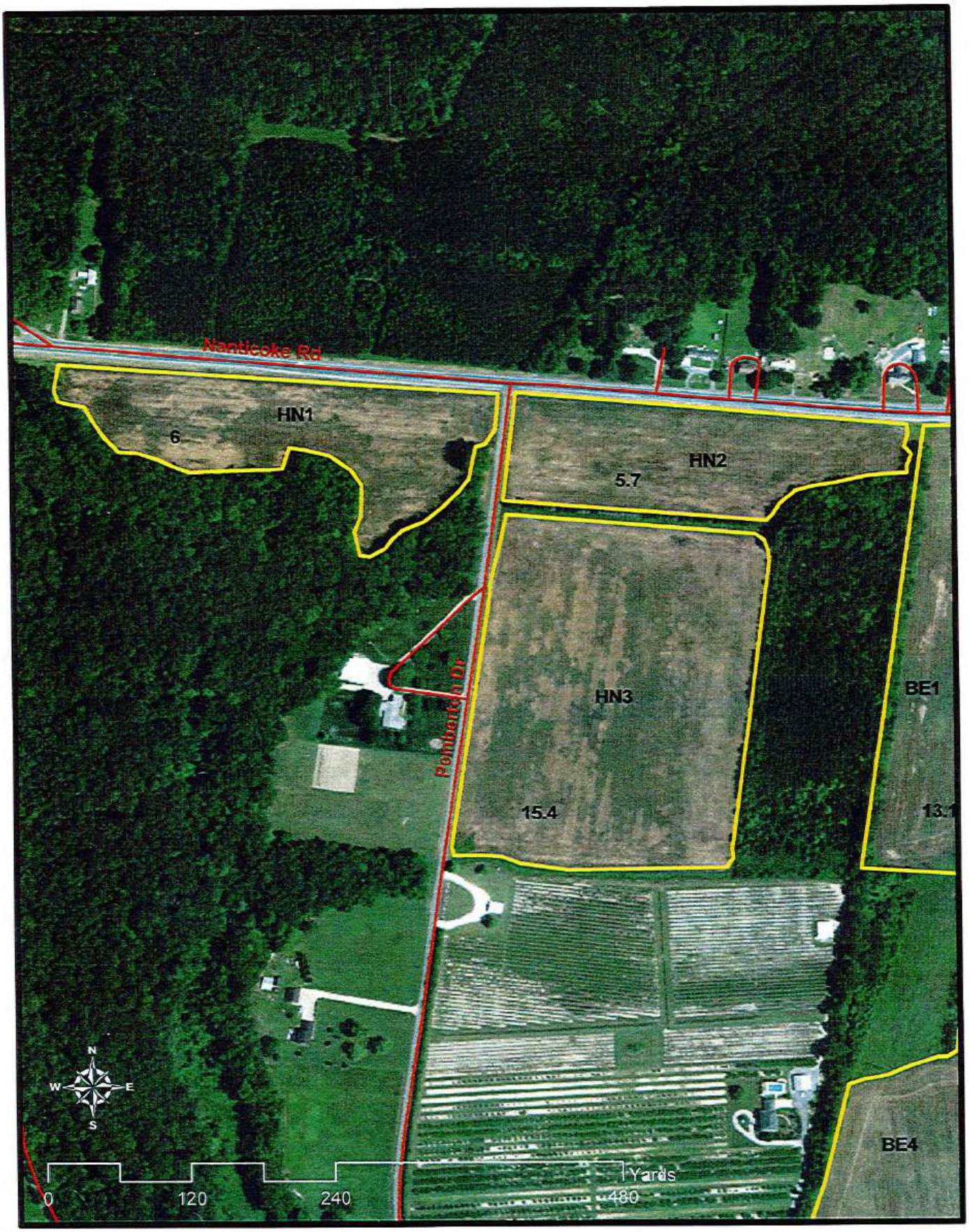
Calloway Brothers
Hales Walmart #728-1554

Calloway Brothers
Faye Hatton, Nan, Sandra Saulsbury, & Phillis Webster - Brad



Calloway Brothers
Hensley



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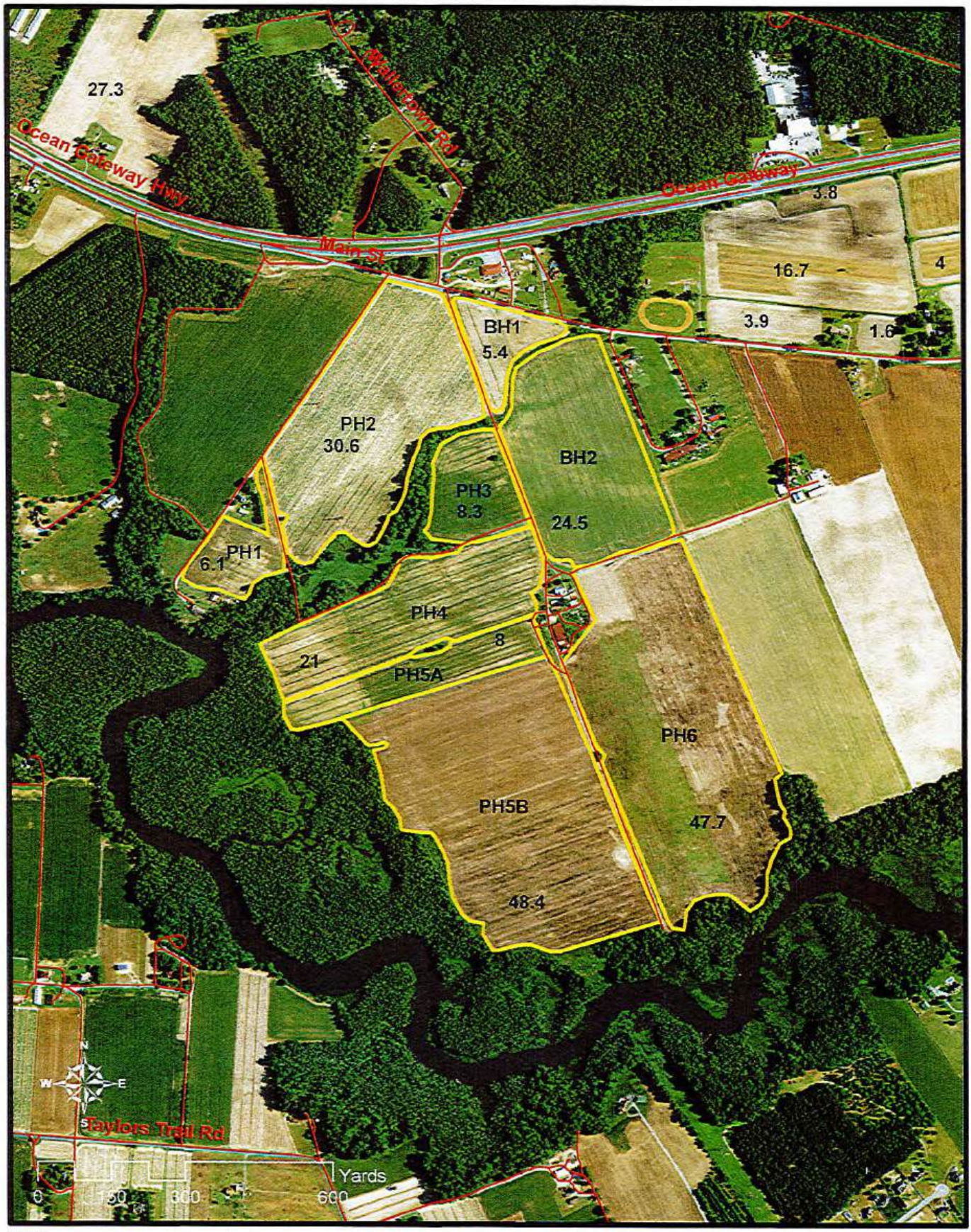
Calloway Brothers
Pat Hochmuth, Bill Hochmuth



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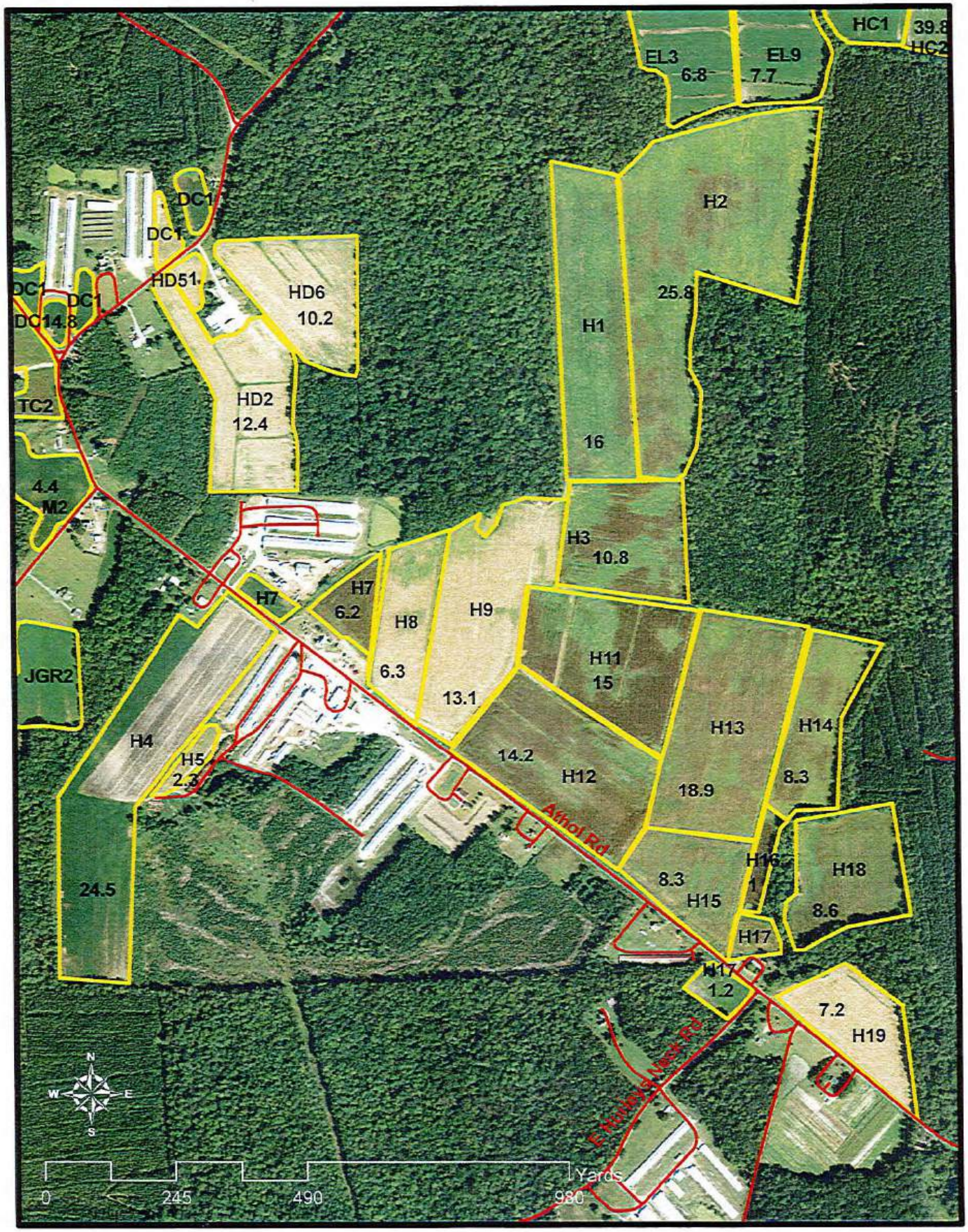
Calloway Brothers
Home

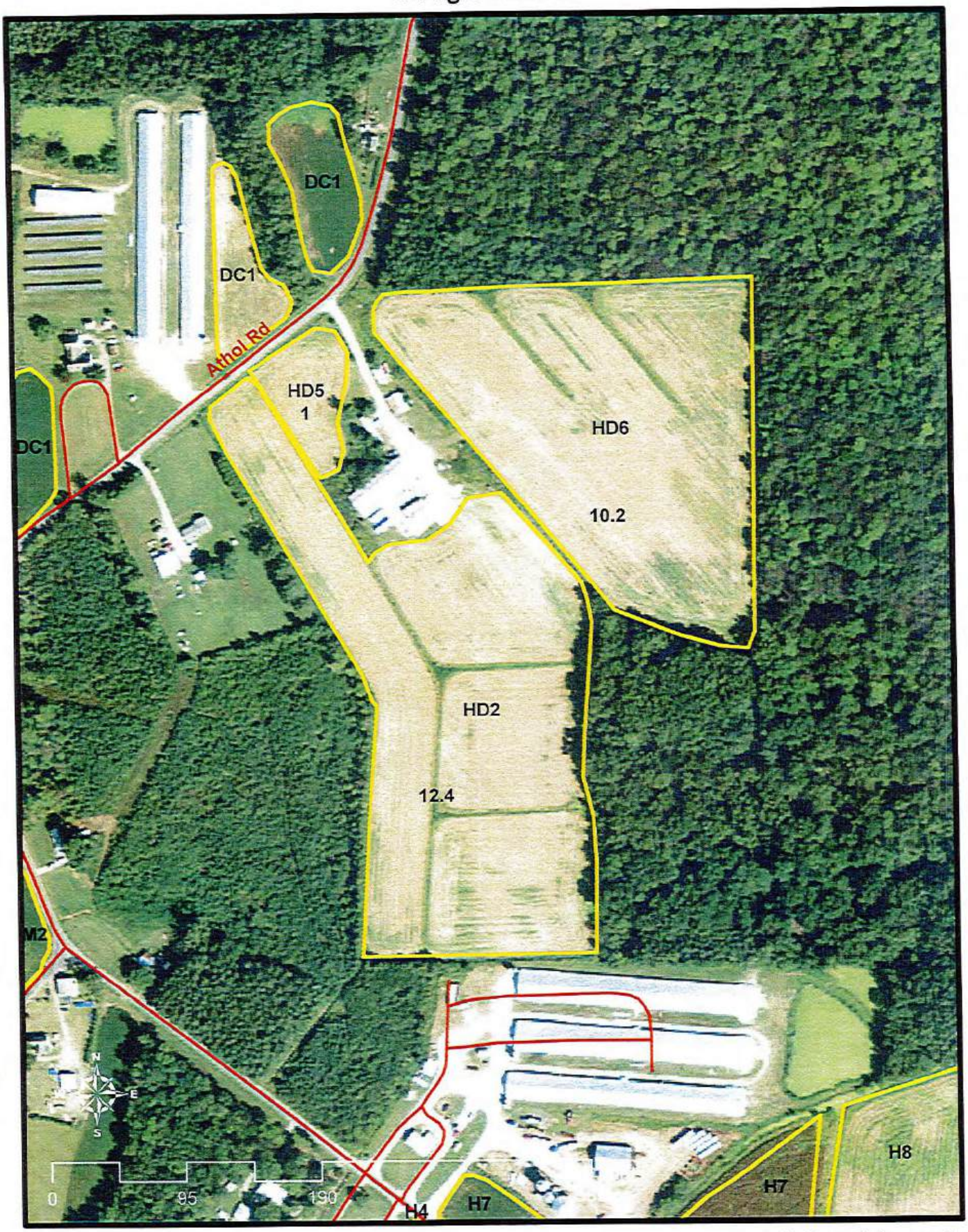


Calloway Brothers
Bobby's, Jeff Gambrill & Lloyd

3/24

McConnell Agronomics

Calloway Brothers
Doug's Home



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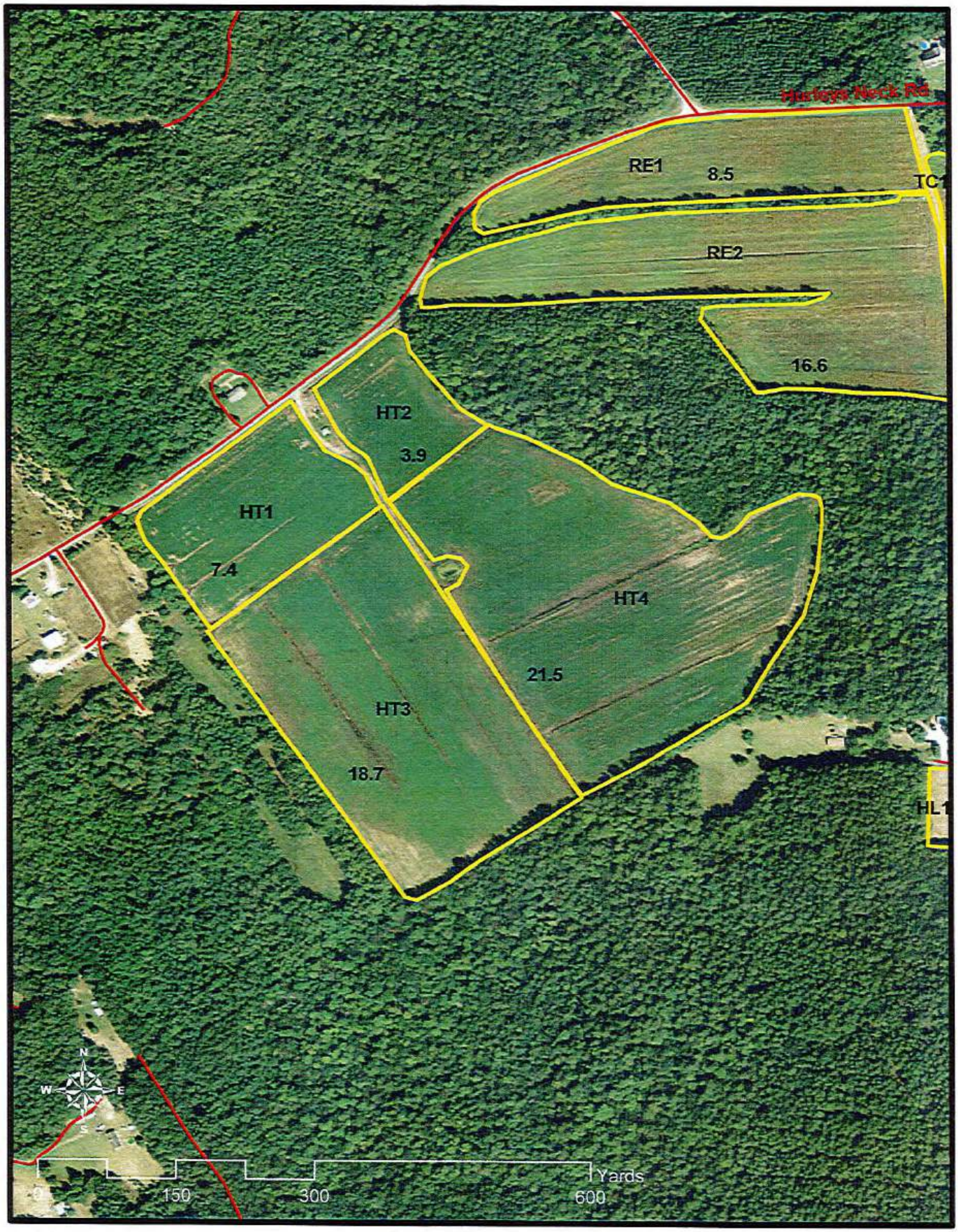
Calloway Brothers
Home Tank

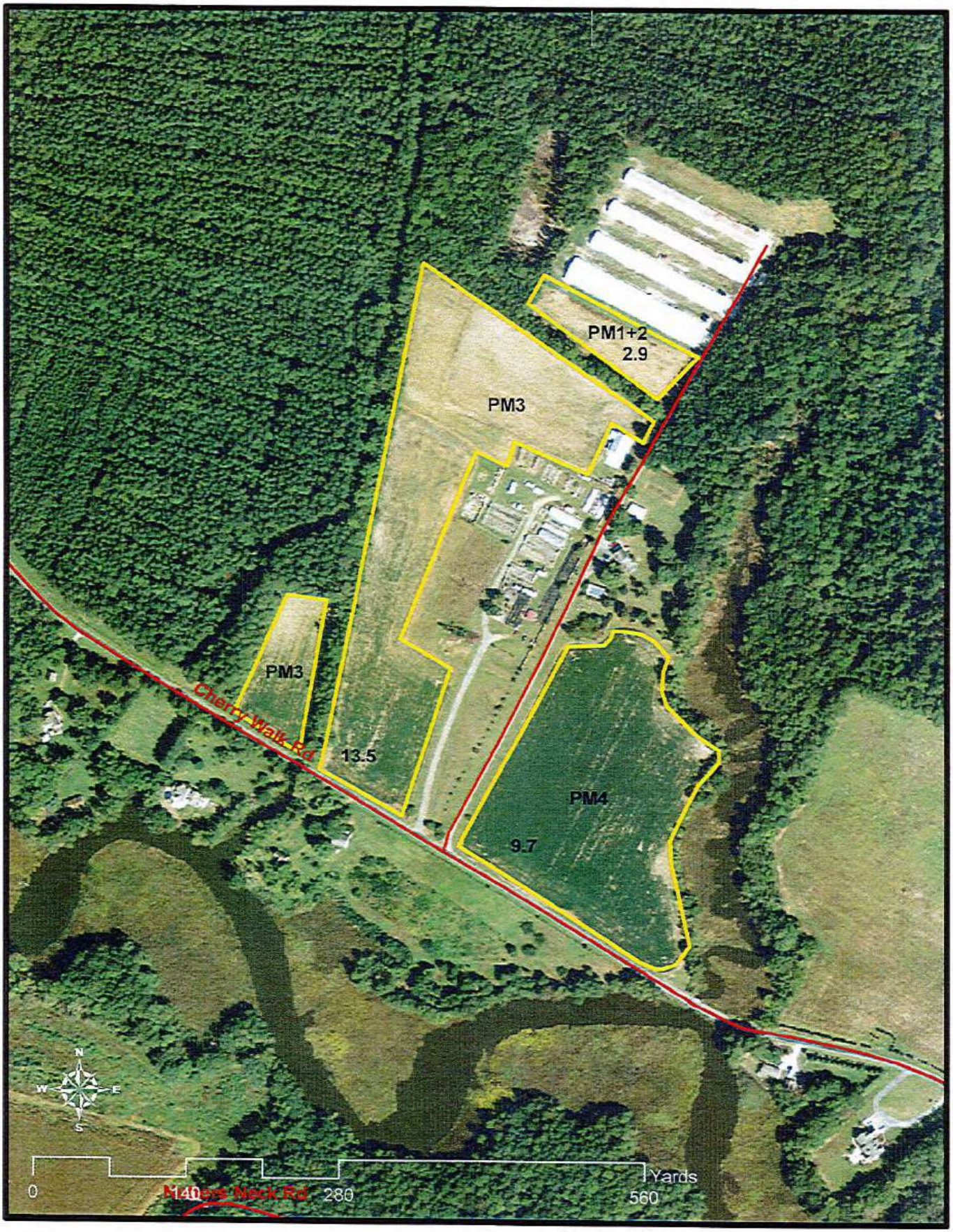


Calloway Brothers
Johnson Upper Ferry

3/24

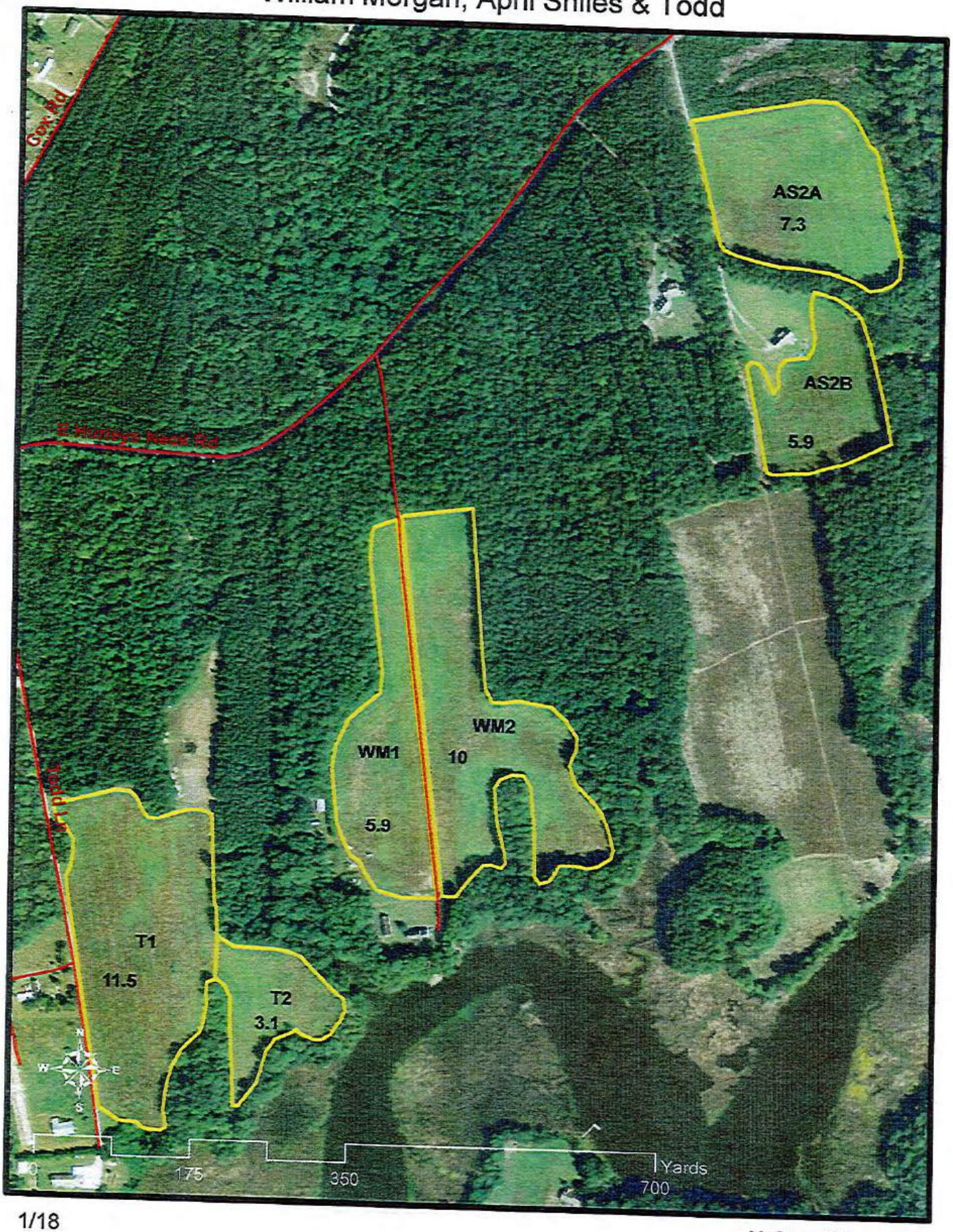
McConnell Agronomics

Calloway Brothers
Pat Moore



McConnell Agronomics

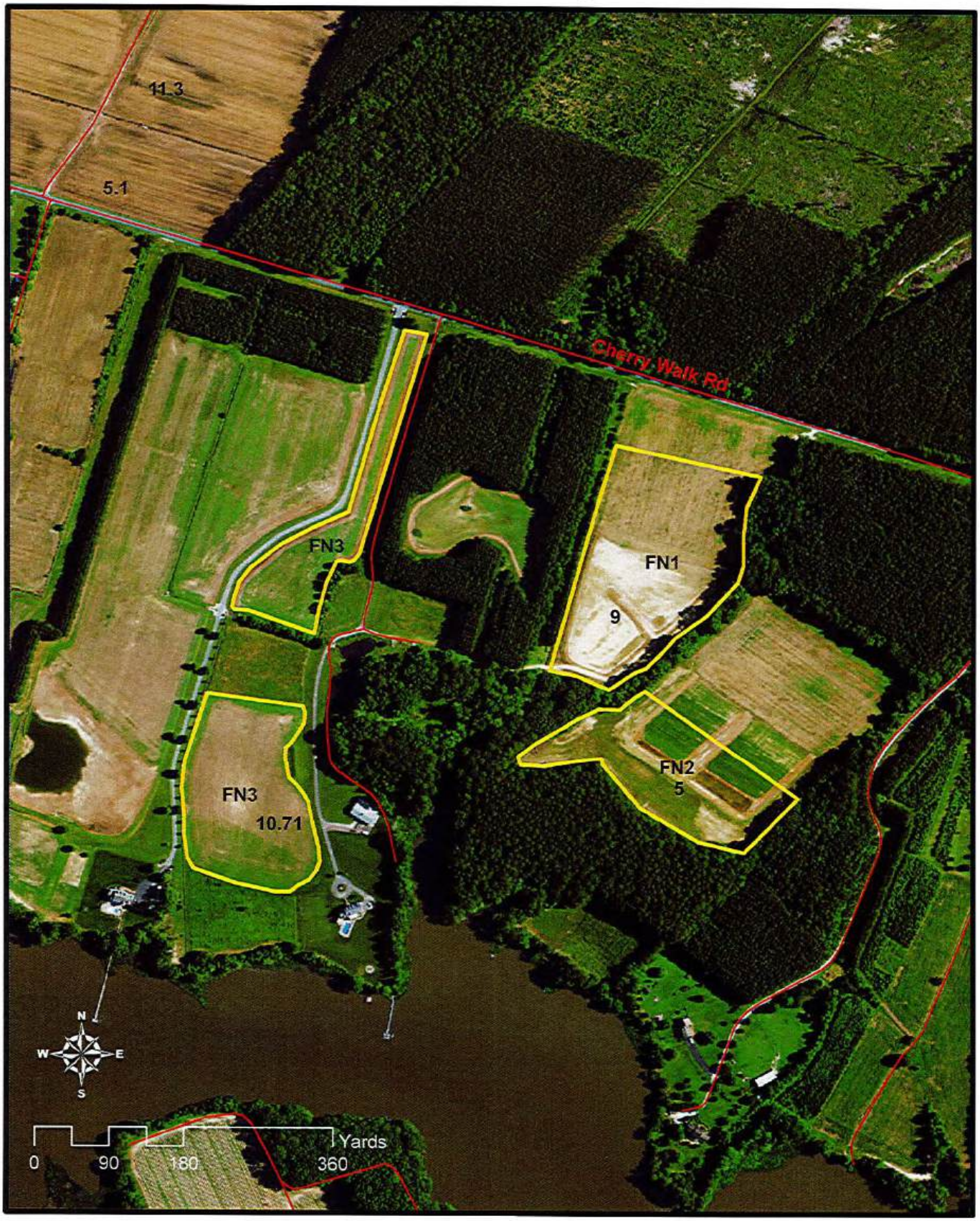
Calloway Brothers
William Morgan, April Shiles & Todd



1/18

McConnell Agronomics

Calloway Brothers
Frank Nashay

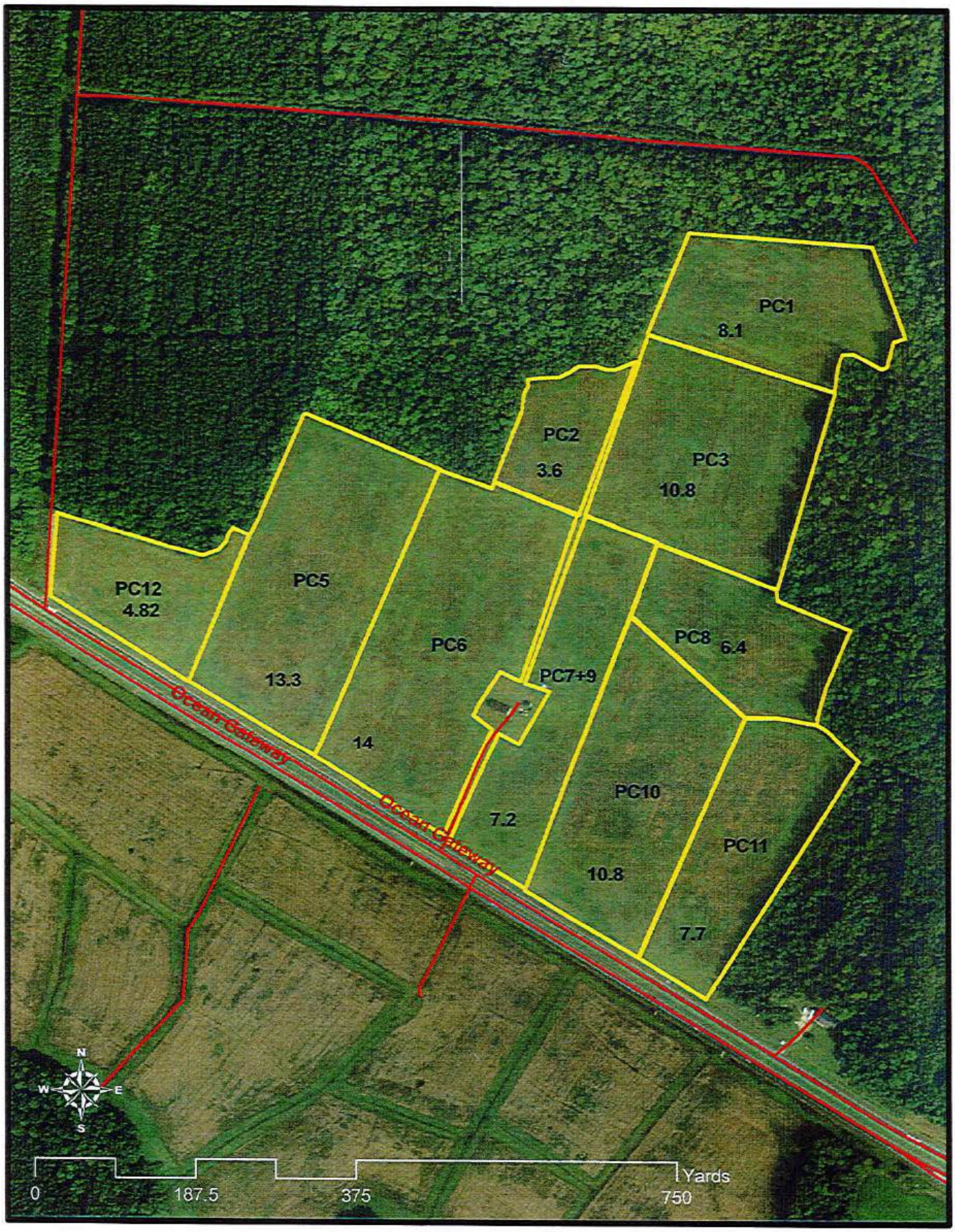


Calloway Brothers
Bill Palechek 3227

2/24

McConnell Agronomics

Calloway Brothers
Bill Palechek 3228



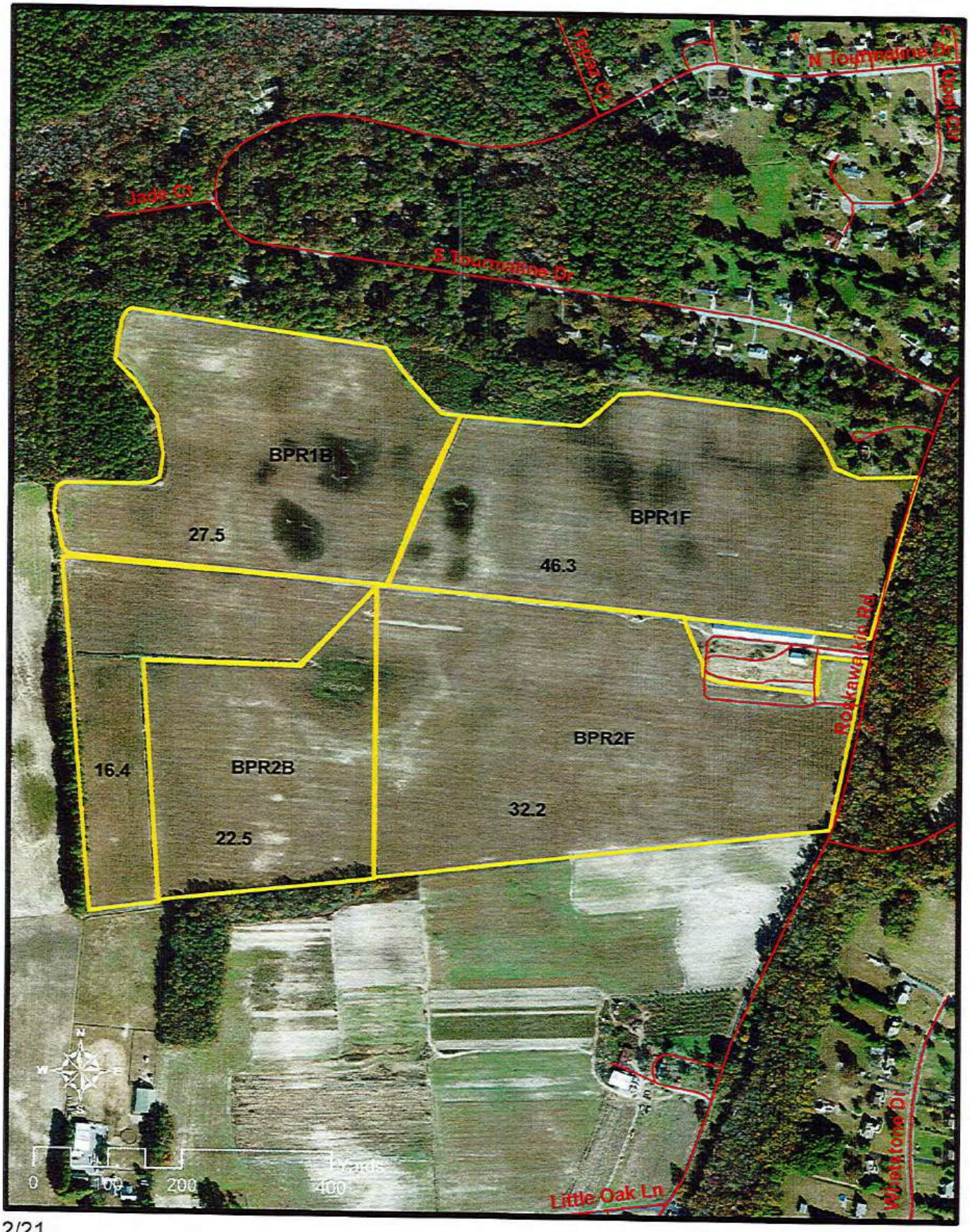
McConnell Agronomics

Calloway Brothers
Bill Palecheck 2579

2/21

McConnell Agronomics

Calloway Brothers
V Phillips Rockawalkin



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Calloway Brothers
George Phillips - Marks Nutters Neck

McConnell Agronomics

Calloway Brothers
George Phillips - Paige 234

Calloway Brothers
Mike Phillips Home, Right & V Phillips Home

2/21

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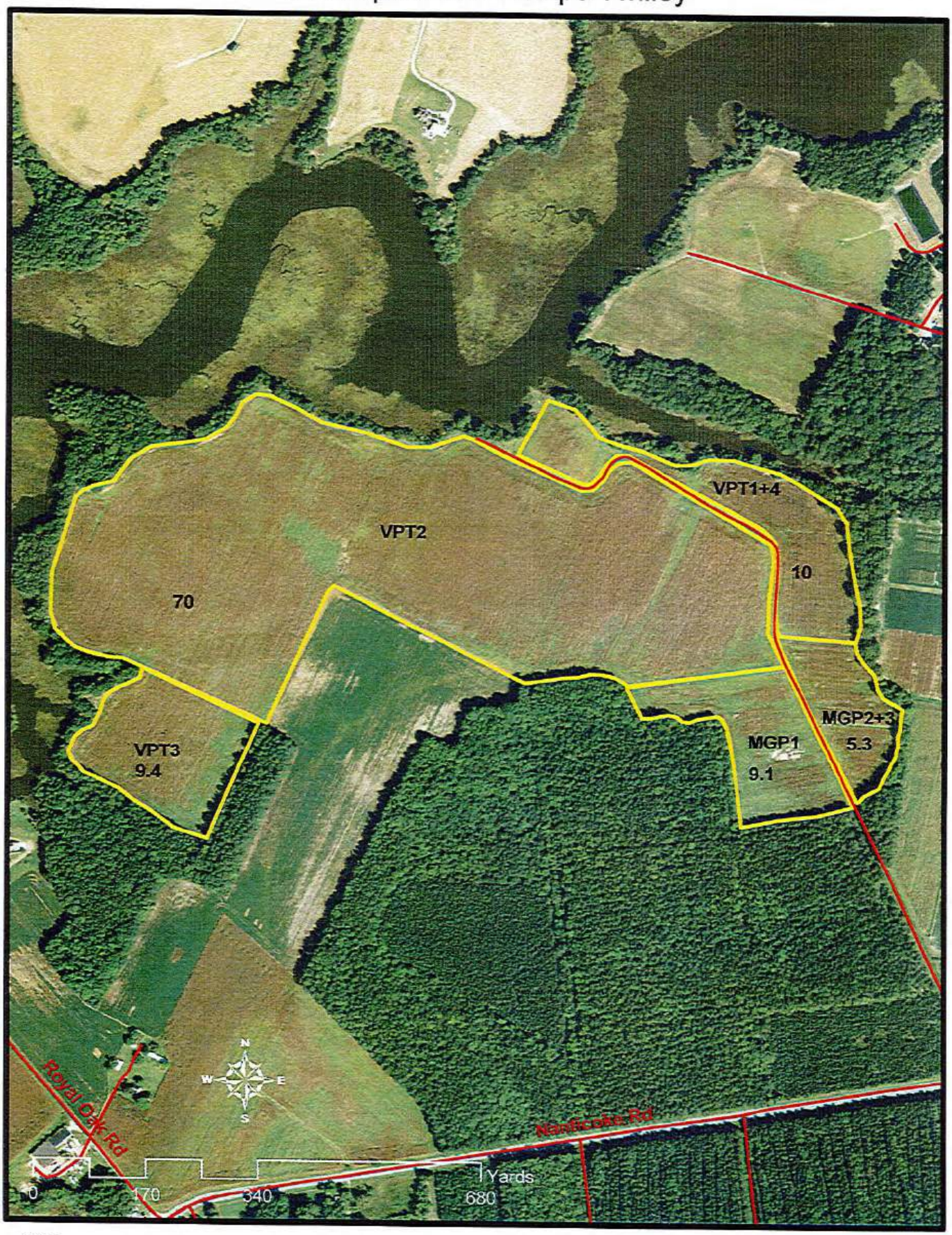
Calloway Brothers
V Phillips & MG Phillips Twilley



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Calloway Brothers
Paige Pilchard

2/24

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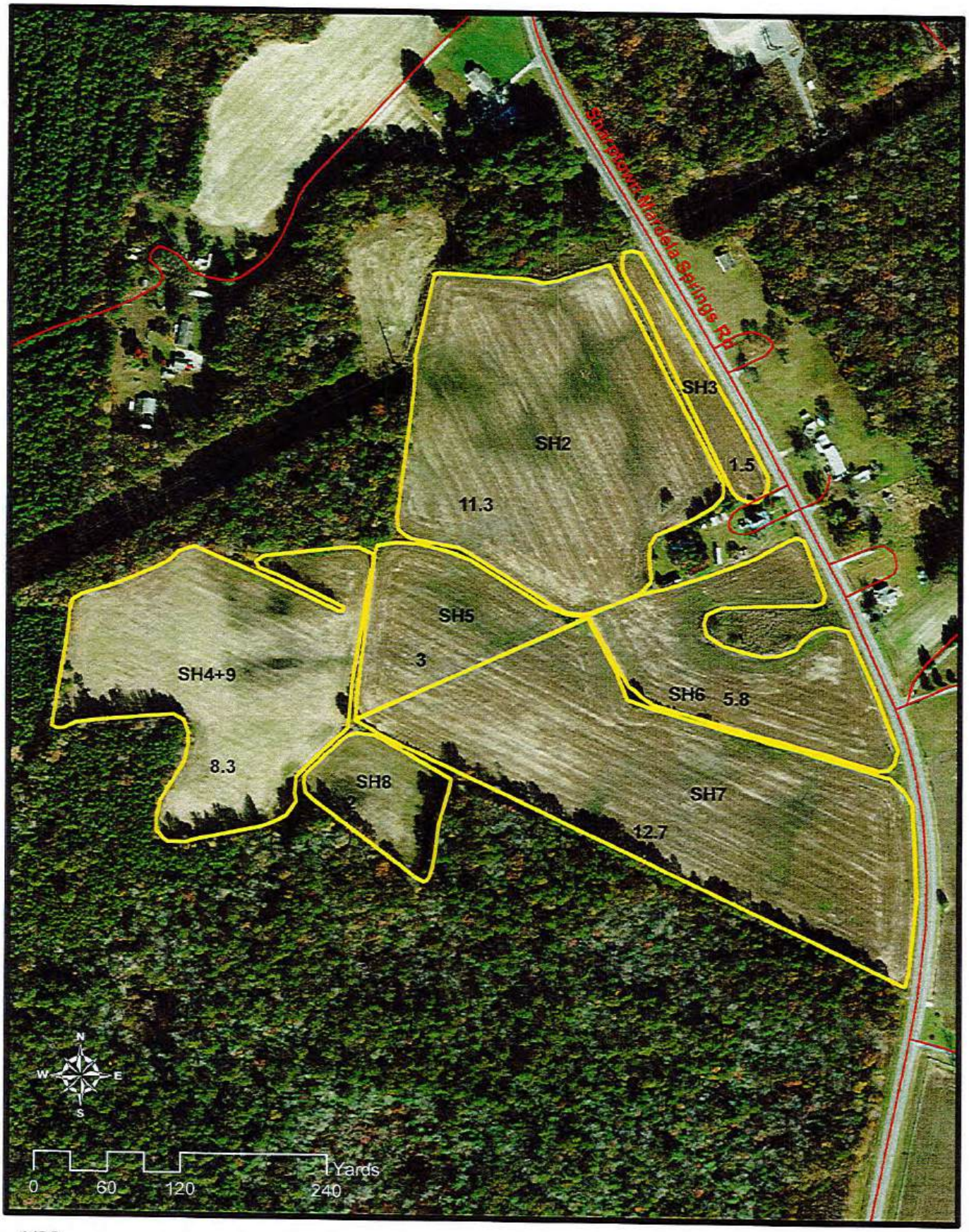
Calloway Brothers
Louise Sheman

3/24

McConnell Agronomics

Calloway Brothers
Shockley



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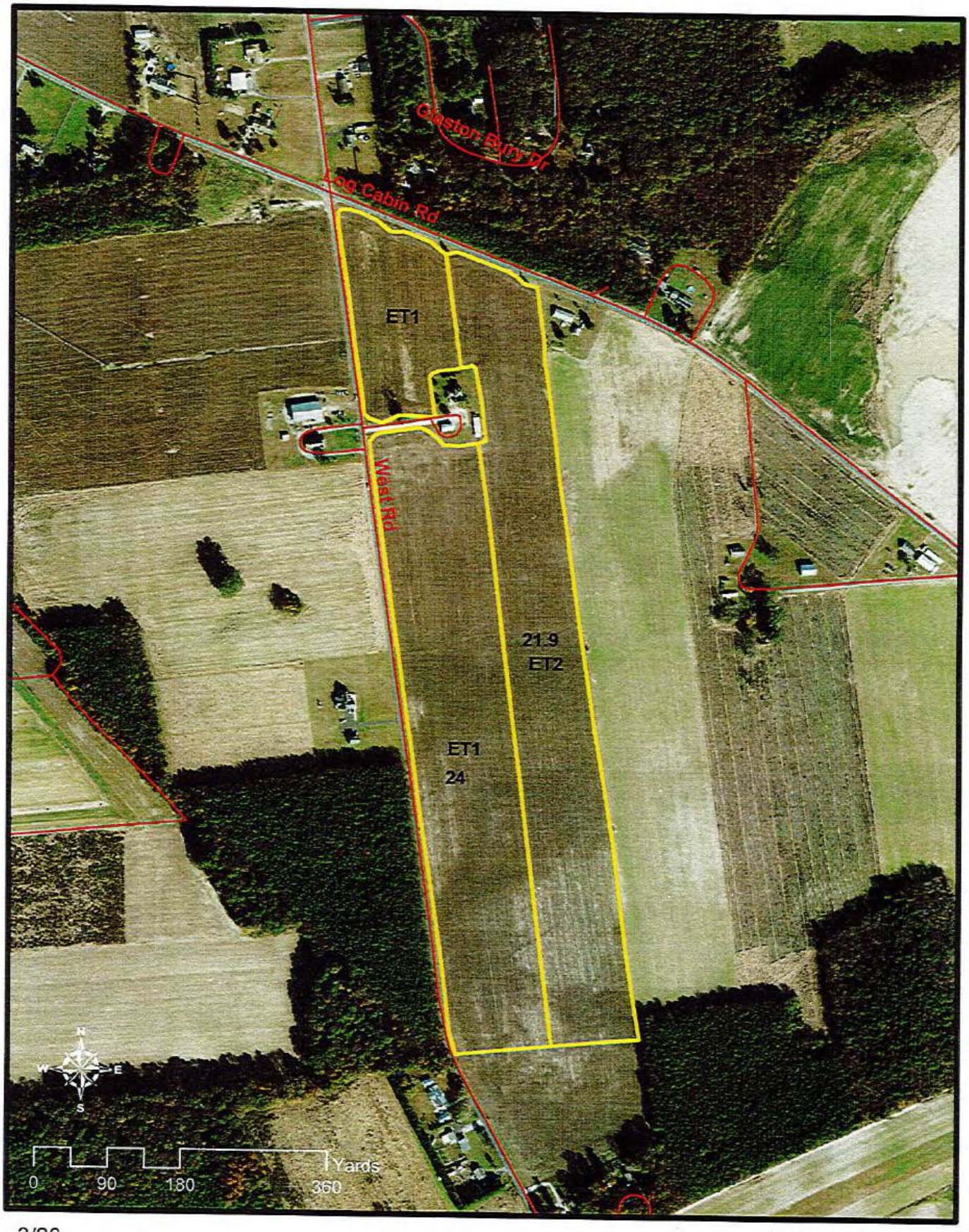
Calloway Brothers
Eric Twilley



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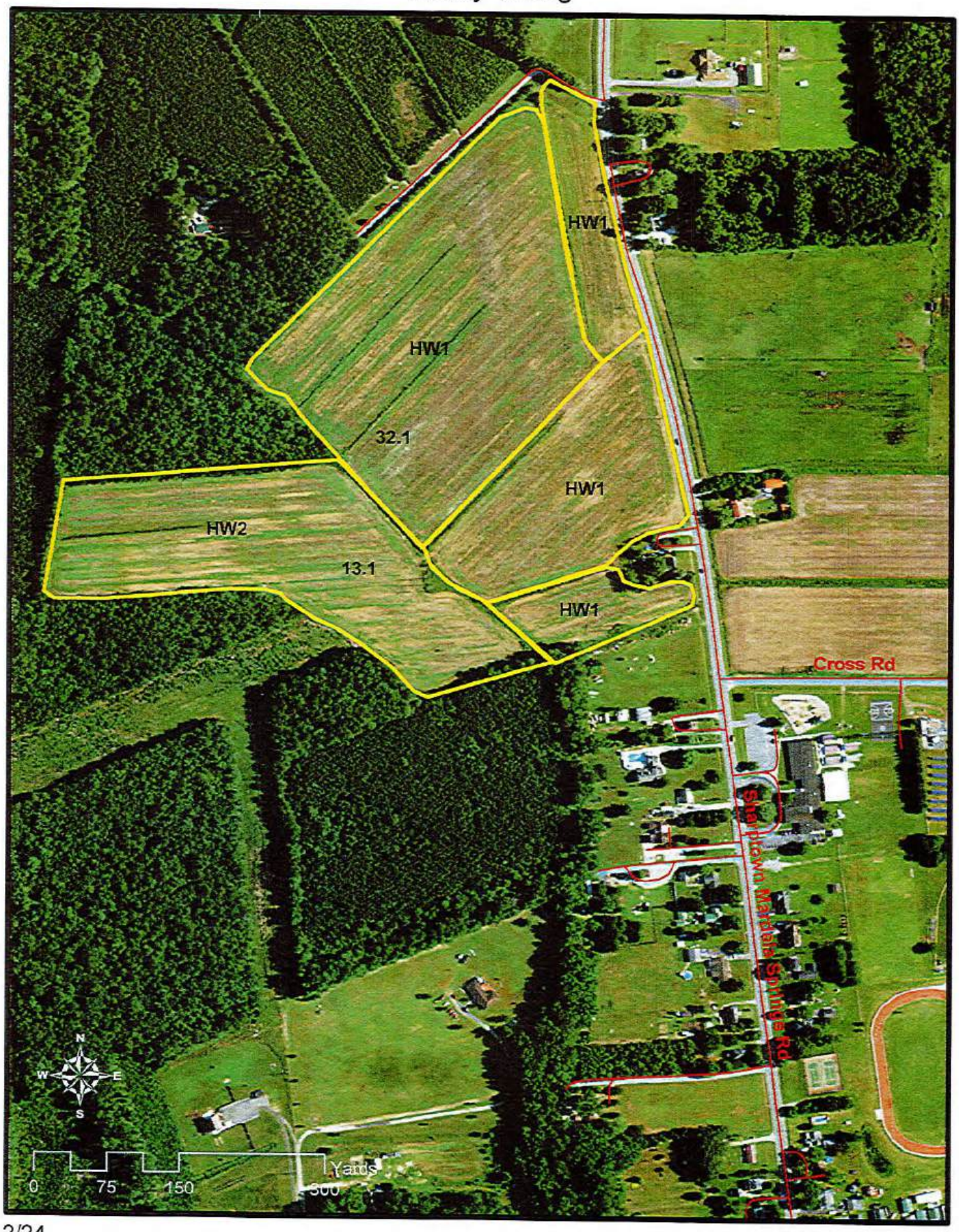
Calloway Brothers
Henry Wang



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Calloway Brothers
Taylor White

3/23

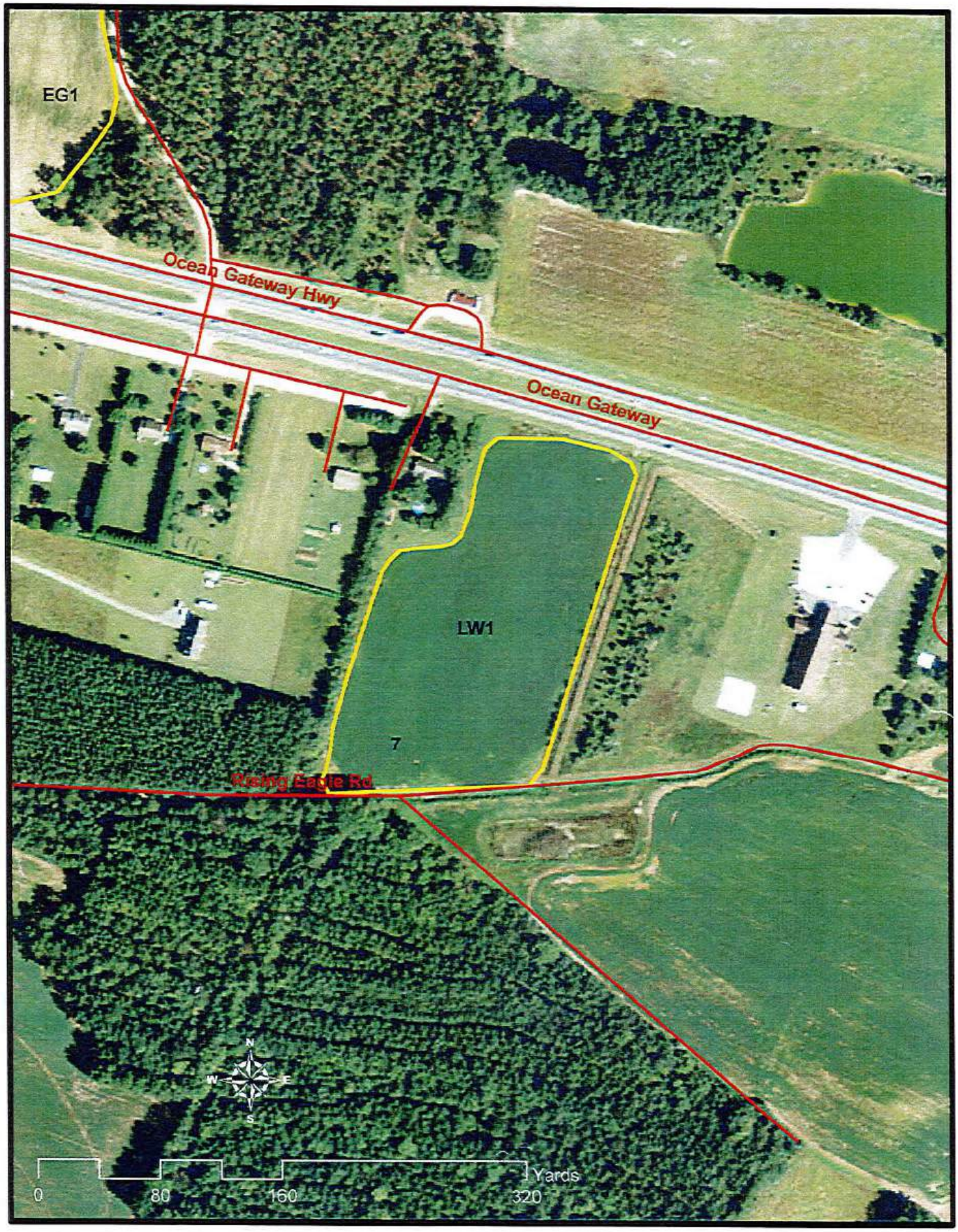
McConnell Agronomics

Calloway Brothers
Donald Wilson

1/18

McConnell Agronomics

Calloway Brothers
Stanford Wilson



McConnell Agronomics

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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3313

Results For : CALLOWAY BROTHERS
Location : ADKNS HISTORICAL
Sample ID : ADH1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.6				
Buffer pH	6.85				
Phosphorus, ppm P	389				
P Saturation	69				
Potassium, ppm K	89				
Calcium, ppm Ca	253				
Magnesium, ppm Mg	65				
Sodium, ppm Na	3				
CEC Sum of Cations, meq/100g	2.7				
H % Saturation	23				
K % Saturation	9				
Ca % Saturation	47				
Mg % Saturation	20				
Na % Saturation	1				
Organic Matter, %	1.55				
Est. Organic Carbon, %	0.90				

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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3314

Results For : CALLOWAY BROTHERS
Location : ADKNS HISTORICAL
Sample ID : ADH2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.78				
Phosphorus, ppm P	260				
P Saturation	43				
Potassium, ppm K	100				
Calcium, ppm Ca	409				
Magnesium, ppm Mg	121				
Sodium, ppm Na	5				
CEC Sum of Cations, meq/100g	4.2				
H % Saturation	21				
K % Saturation	6				
Ca % Saturation	49				
Mg % Saturation	24				
Na % Saturation	0				
Organic Matter, %	2.28				
Est. Organic Carbon, %	1.32				

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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40470

Results For : CALLOWAY BROTHERS
Location : EARNEST ADKINS
Sample ID : EA2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.2				
Buffer pH	6.75				
Phosphorus, ppm P	169				
P Saturation	30				
Potassium, ppm K	127				
Calcium, ppm Ca	220				
Magnesium, ppm Mg	89				
Sodium, ppm Na	10				
CEC Sum of Cations, meq/100g	3.4				
H % Saturation	35				
K % Saturation	10				
Ca % Saturation	32				
Mg % Saturation	22				
Na % Saturation	1				
Organic Matter, %	1.78				
Est. Organic Carbon, %	1.03				

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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

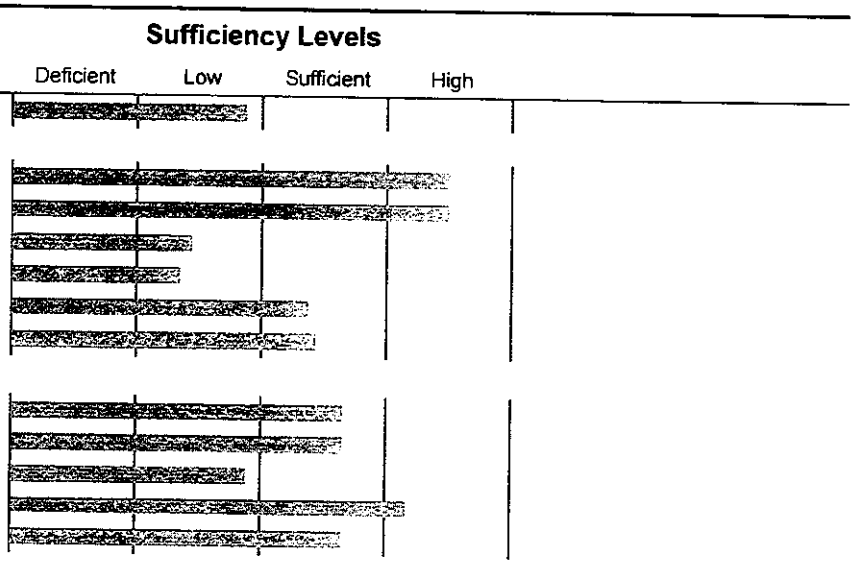
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4439

Results For : CALLOWAY BROTHERS
Location : JIMMY ADKINS
Sample ID : JA1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.9
Buffer pH	6.9
Phosphorus, ppm P	395
P Saturation	84
Potassium, ppm K	66
Calcium, ppm Ca	340
Magnesium, ppm Mg	91
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.2
H % Saturation	16
K % Saturation	5
Ca % Saturation	53
Mg % Saturation	24
Na % Saturation	2
Organic Matter, %	1.3
Est. Organic Carbon, %	0.76



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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

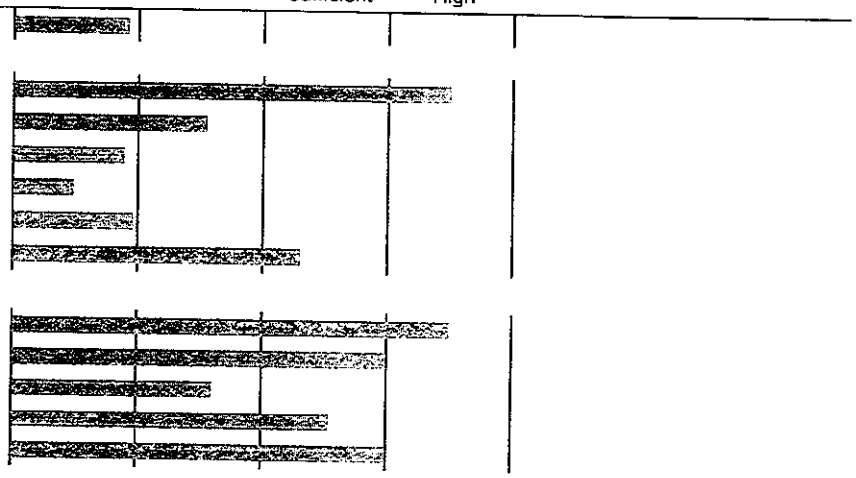
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4428

Results For : CALLOWAY BROTHERS
Location : ALFRED ASHTON
Sample ID : AA1

Extraction Method: Mehlich 3

	Analysis
pH	5.1
Buffer pH	6.8
Phosphorus, ppm P	108
P Saturation	14
Potassium, ppm K	41
Calcium, ppm Ca	125
Magnesium, ppm Mg	32
Sodium, ppm Na	11
CEC Sum of Cations, meq/100g	1.7
H % Saturation	39
K % Saturation	6
Ca % Saturation	36
Mg % Saturation	16
Na % Saturation	3
Organic Matter, %	4.9
Est. Organic Carbon, %	2.86

Sufficiency Levels



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Soil Analysis Report

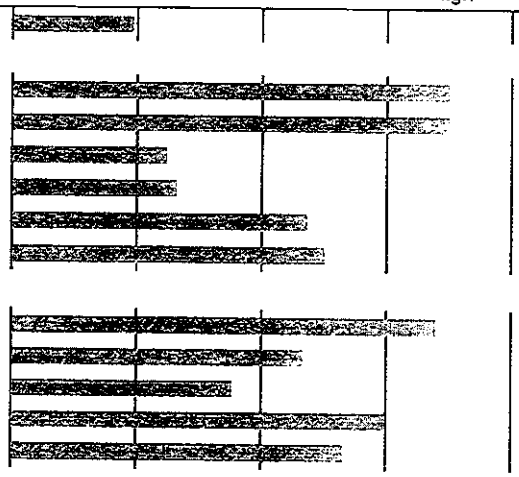
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4429

Results For : CALLOWAY BROTHERS
Location : ALFRED ASHTON
Sample ID : AA2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.4	
Buffer pH	6.7	
Phosphorus, ppm P	445	
P Saturation	72	
Potassium, ppm K	57	
Calcium, ppm Ca	333	
Magnesium, ppm Mg	90	
Sodium, ppm Na	15	
CEC Sum of Cations, meq/100g	3.6	
H % Saturation	28	
K % Saturation	4	
Ca % Saturation	45	
Mg % Saturation	21	
Na % Saturation	2	
Organic Matter, %	1.7	
Est. Organic Carbon, %	0.96	



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Soil Analysis Report

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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

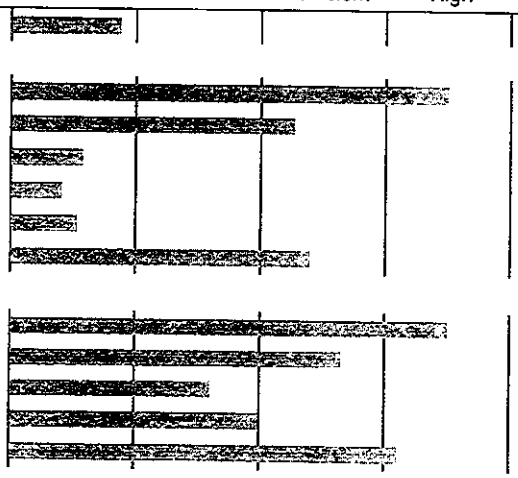
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4430

Results For : CALLOWAY BROTHERS
Location : ALFRED ASHTON
Sample ID : AA3

Extraction Method: Mehlich 3

	Analysis
pH	4.9
Buffer pH	6.6
Phosphorus, ppm P	156
P Saturation	32
Potassium, ppm K	27
Calcium, ppm Ca	103
Magnesium, ppm Mg	18
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	1.4
H % Saturation	45
K % Saturation	5
Ca % Saturation	36
Mg % Saturation	10
Na % Saturation	4
Organic Matter, %	1.8
Est. Organic Carbon, %	1.02

Sufficiency Levels



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CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4431

Results For : CALLOWAY BROTHERS
Location : ALFRED ASHTON
Sample ID : AA4

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.8				
Phosphorus, ppm P	185				
P Saturation	29				
Potassium, ppm K	47				
Calcium, ppm Ca	212				
Magnesium, ppm Mg	65				
Sodium, ppm Na	11				
CEC Sum of Cations, meq/100g	2.5				
H % Saturation	30				
K % Saturation	5				
Ca % Saturation	41				
Mg % Saturation	22				
Na % Saturation	2				
Organic Matter, %	2.7				
Est. Organic Carbon, %	1.56				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4432

Results For : CALLOWAY BROTHERS
Location : ALFRED ASHTON
Sample ID : AA5

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.2	
Buffer pH	6.8	
Phosphorus, ppm P	223	
P Saturation	40	
Potassium, ppm K	50	
Calcium, ppm Ca	136	
Magnesium, ppm Mg	51	
Sodium, ppm Na	15	
CEC Sum of Cations, meq/100g	2.0	
H % Saturation	34	
K % Saturation	7	
Ca % Saturation	34	
Mg % Saturation	21	
Na % Saturation	3	
Organic Matter, %	2.1	
Est. Organic Carbon, %	1.24	

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CALLOWAY
CALLOWAY BROTHERS
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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4444

Results For : CALLOWAY BROTHERS
Location : BEAZER EAST
Sample ID : BE1A, BE1B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.9				
Phosphorus, ppm P	78				
P Saturation	30				
Potassium, ppm K	71				
Calcium, ppm Ca	415				
Magnesium, ppm Mg	181				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	4.1				
H % Saturation	7				
K % Saturation	4				
Ca % Saturation	50				
Mg % Saturation	37				
Na % Saturation	1				
Organic Matter, %	1.4				
Est. Organic Carbon, %	0.82				

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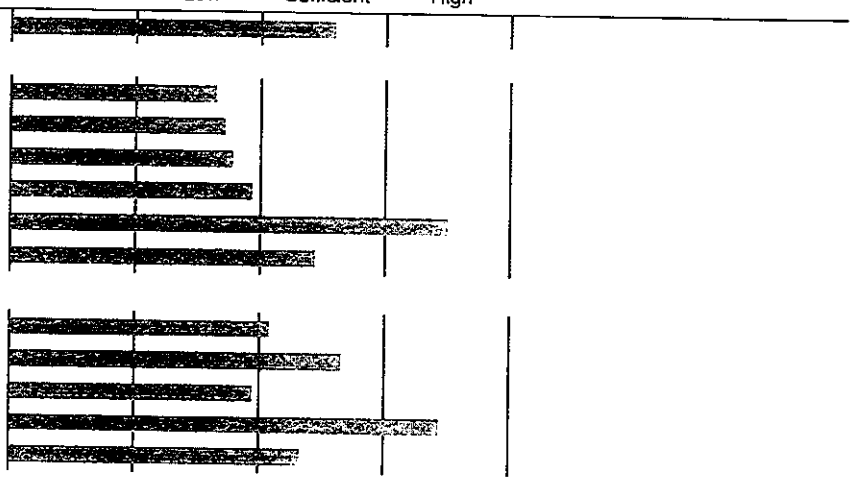
MARDELA SPRINGS MD 21837

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4445

Results For : CALLOWAY BROTHERS
Location : BEAZER EAST
Sample ID : BE3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.4	
Buffer pH	6.9	
Phosphorus, ppm P	41	
P Saturation	18	
Potassium, ppm K	81	
Calcium, ppm Ca	484	
Magnesium, ppm Mg	154	
Sodium, ppm Na	14	
CEC Sum of Cations, meq/100g	4.3	
H % Saturation	9	
K % Saturation	5	
Ca % Saturation	56	
Mg % Saturation	29	
Na % Saturation	1	
Organic Matter, %	1.9	
Est. Organic Carbon, %	1.08	



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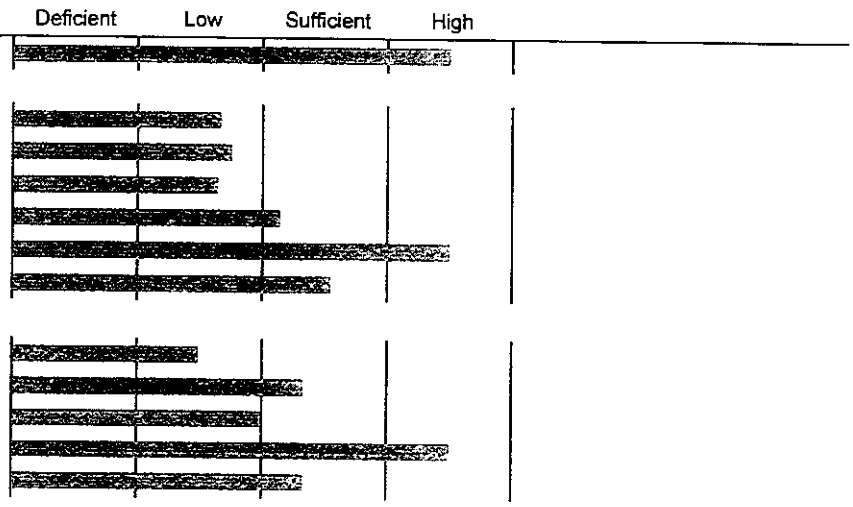
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4446

Results For : CALLOWAY BROTHERS
Location : BEAZER EAST
Sample ID : BE4

Extraction Method: Mehlich 3

	Analysis
pH	7.0
Buffer pH	7.0
Phosphorus, ppm P	42
P Saturation	19
Potassium, ppm K	75
Calcium, ppm Ca	572
Magnesium, ppm Mg	191
Sodium, ppm Na	16
CEC Sum of Cations, meq/100g	4.9
H % Saturation	4
K % Saturation	4
Ca % Saturation	58
Mg % Saturation	32
Na % Saturation	1
Organic Matter, %	1.6
Est. Organic Carbon, %	0.91

Sufficiency Levels



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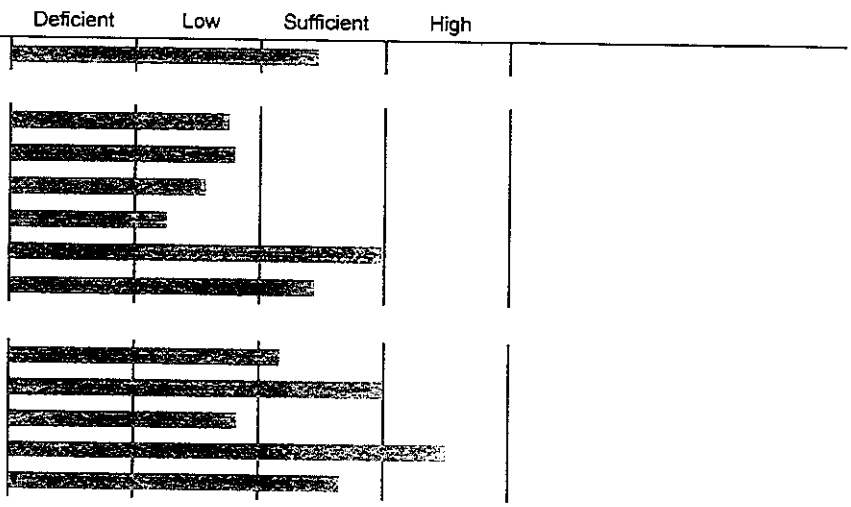
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4447

Results For : CALLOWAY BROTHERS
Location : BEAZER EAST
Sample ID : BE5

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.3
Buffer pH	6.9
Phosphorus, ppm P	44
P Saturation	20
Potassium, ppm K	72
Calcium, ppm Ca	317
Magnesium, ppm Mg	130
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.2
H % Saturation	10
K % Saturation	6
Ca % Saturation	49
Mg % Saturation	33
Na % Saturation	2
Organic Matter, %	1.4
Est. Organic Carbon, %	0.81



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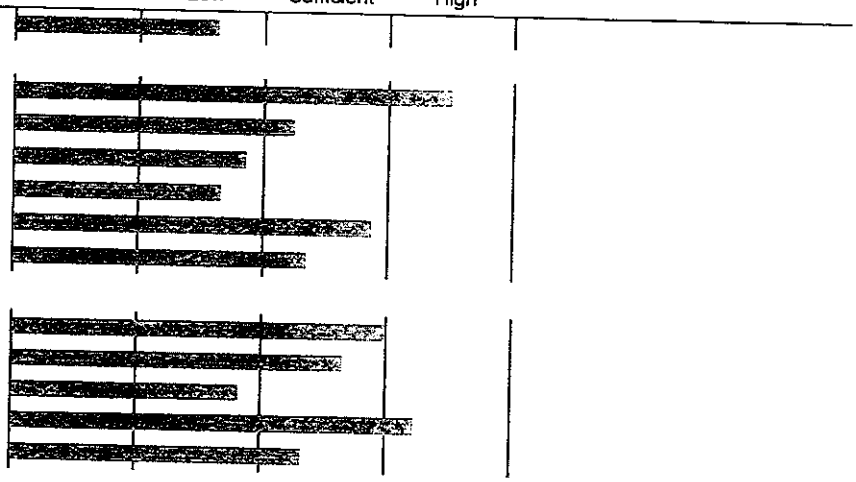
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4497

Results For : CALLOWAY BROTHERS
Location : KING BURNETT
Sample ID : KB4

Extraction Method: Mehlich 3

	Analysis
pH	5.8
Buffer pH	6.8
Phosphorus, ppm P	110
P Saturation	31
Potassium, ppm K	85
Calcium, ppm Ca	414
Magnesium, ppm Mg	123
Sodium, ppm Na	12
CEC Sum of Cations, meq/100g	4.2
H % Saturation	20
K % Saturation	5
Ca % Saturation	49
Mg % Saturation	25
Na % Saturation	1
Organic Matter, %	1.7
Est. Organic Carbon, %	0.99

Sufficiency Levels



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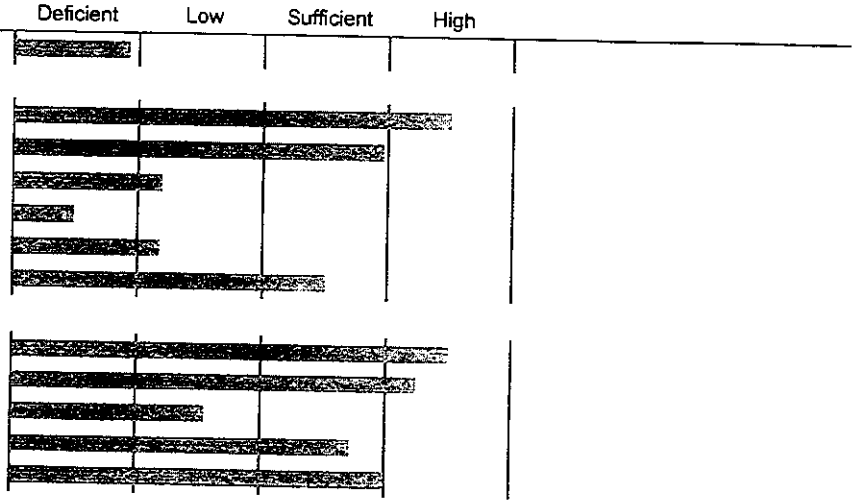
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4498

Results For : CALLOWAY BROTHERS
Location : KING BURNETT
Sample ID : KB6

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.1	
Buffer pH	6.8	
Phosphorus, ppm P	173	
P Saturation	49	
Potassium, ppm K	55	
Calcium, ppm Ca	124	
Magnesium, ppm Mg	39	
Sodium, ppm Na	15	
CEC Sum of Cations, meq/100g	1.9	
H % Saturation	38	
K % Saturation	8	
Ca % Saturation	33	
Mg % Saturation	18	
Na % Saturation	3	
Organic Matter, %	0.9	
Est. Organic Carbon, %	0.53	



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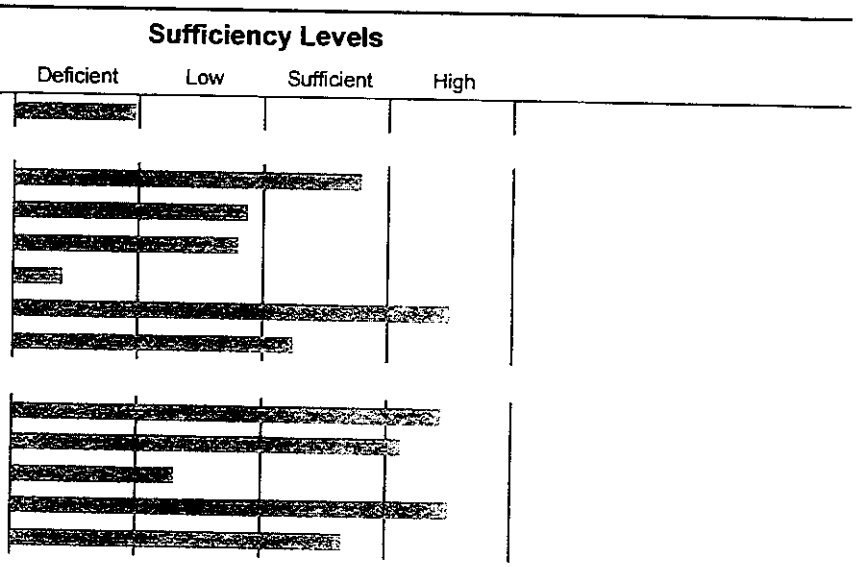
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4448

Results For : CALLOWAY BROTHERS
Location : KING BURNETT
Sample ID : KB10

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.4
Buffer pH	6.8
Phosphorus, ppm P	89
P Saturation	22
Potassium, ppm K	82
Calcium, ppm Ca	102
Magnesium, ppm Mg	147
Sodium, ppm Na	10
CEC Sum of Cations, meq/100g	2.8
H % Saturation	29
K % Saturation	7
Ca % Saturation	18
Mg % Saturation	44
Na % Saturation	2
Organic Matter, %	2.2
Est. Organic Carbon, %	1.30



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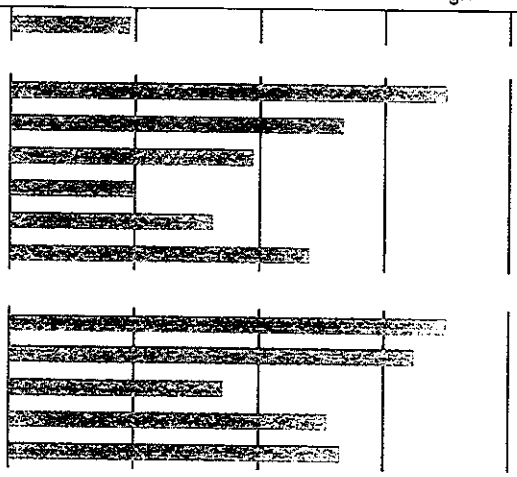
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40483

Results For : CALLOWAY BROTHERS
Location : S[redacted] Ashcraft, steve
Sample ID : AO1

Extraction Method: Mehlich 3

	Analysis
pH	5.3
Buffer pH	6.79
Phosphorus, ppm P	198
P Saturation	42
Potassium, ppm K	89
Calcium, ppm Ca	252
Magnesium, ppm Mg	54
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	2.9
H % Saturation	31
K % Saturation	8
Ca % Saturation	43
Mg % Saturation	16
Na % Saturation	2
Organic Matter, %	1.15
Est. Organic Carbon, %	0.67

Sufficiency Levels



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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3354

Results For : CALLOWAY BROTHERS
Location : [redacted] Ashcroft, steve
Sample ID : AO2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.88				
Phosphorus, ppm P	205				
P Saturation	41				
Potassium, ppm K	58				
Calcium, ppm Ca	179				
Magnesium, ppm Mg	10				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	1.7				
H % Saturation	30				
K % Saturation	9				
Ca % Saturation	54				
Mg % Saturation	5				
Na % Saturation	2				
Organic Matter, %	1.90				
Est. Organic Carbon, %	1.10				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3315

Results For : CALLOWAY BROTHERS
Location : TOMMY CALLOWAY
Sample ID : TC1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.9				
Buffer pH	6.95				
Phosphorus, ppm P	287				
P Saturation	82				
Potassium, ppm K	87				
Calcium, ppm Ca	501				
Magnesium, ppm Mg	61				
Sodium, ppm Na	2				
CEC Sum of Cations, meq/100g	3.4				
H % Saturation	5				
K % Saturation	7				
Ca % Saturation	73				
Mg % Saturation	15				
Na % Saturation	0				
Organic Matter, %	1.25				
Est. Organic Carbon, %	0.72				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3316

Results For : CALLOWAY BROTHERS
Location : TOMMY CALLOWAY
Sample ID : TC2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.8	
Buffer pH	6.94	
Phosphorus, ppm P	267	
P Saturation	91	
Potassium, ppm K	43	
Calcium, ppm Ca	505	
Magnesium, ppm Mg	51	
Sodium, ppm Na	4	
CEC Sum of Cations, meq/100g	3.3	
H % Saturation	6	
K % Saturation	3	
Ca % Saturation	77	
Mg % Saturation	13	
Na % Saturation	1	
Organic Matter, %	1.38	
Est. Organic Carbon, %	0.80	

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Soil Analysis Report

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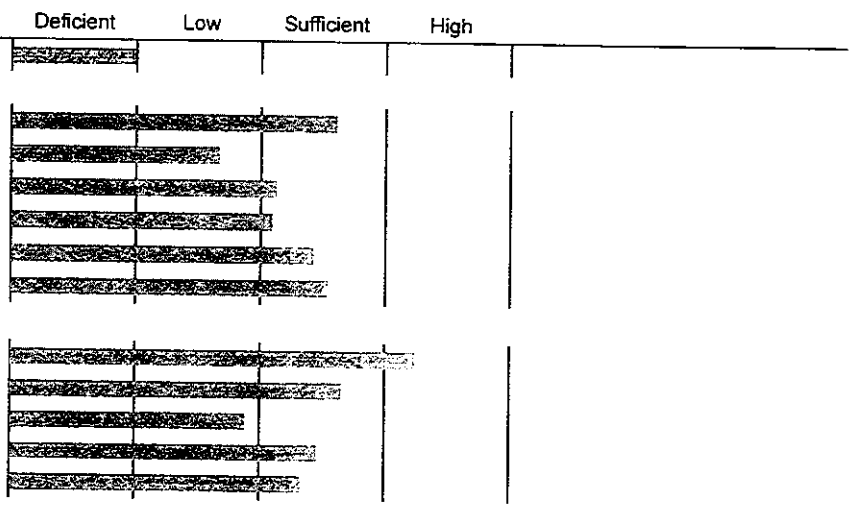
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4499

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT2

Extraction Method: Mehlich 3

	Analysis
pH	5.5
Buffer pH	6.7
Phosphorus, ppm P	81
P Saturation	17
Potassium, ppm K	102
Calcium, ppm Ca	544
Magnesium, ppm Mg	94
Sodium, ppm Na	16
CEC Sum of Cations, meq/100g	5.1
H % Saturation	25
K % Saturation	5
Ca % Saturation	53
Mg % Saturation	15
Na % Saturation	1
Organic Matter, %	3.4
Est. Organic Carbon, %	1.97

Sufficiency Levels



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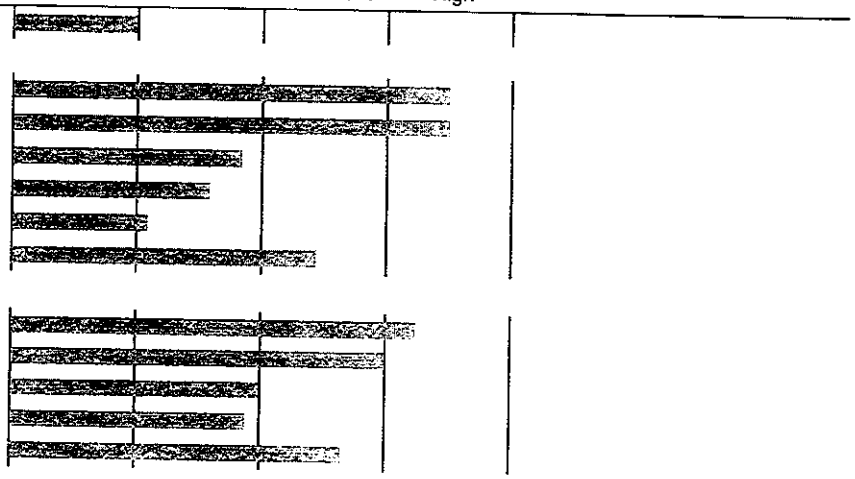
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4500

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT3+4

Extraction Method: Mehlich 3

	Analysis
pH	5.5
Buffer pH	6.8
Phosphorus, ppm P	382
P Saturation	60
Potassium, ppm K	84
Calcium, ppm Ca	396
Magnesium, ppm Mg	36
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.4
H % Saturation	25
K % Saturation	6
Ca % Saturation	58
Mg % Saturation	9
Na % Saturation	2
Organic Matter, %	1.8
Est. Organic Carbon, %	1.03

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4502

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT5

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.9	
Buffer pH	6.8	
Phosphorus, ppm P	81	
P Saturation	16	
Potassium, ppm K	73	
Calcium, ppm Ca	517	
Magnesium, ppm Mg	85	
Sodium, ppm Na	16	
CEC Sum of Cations, meq/100g	4.2	
H % Saturation	16	
K % Saturation	4	
Ca % Saturation	61	
Mg % Saturation	17	
Na % Saturation	2	
Organic Matter, %	3.0	
Est. Organic Carbon, %	1.77	

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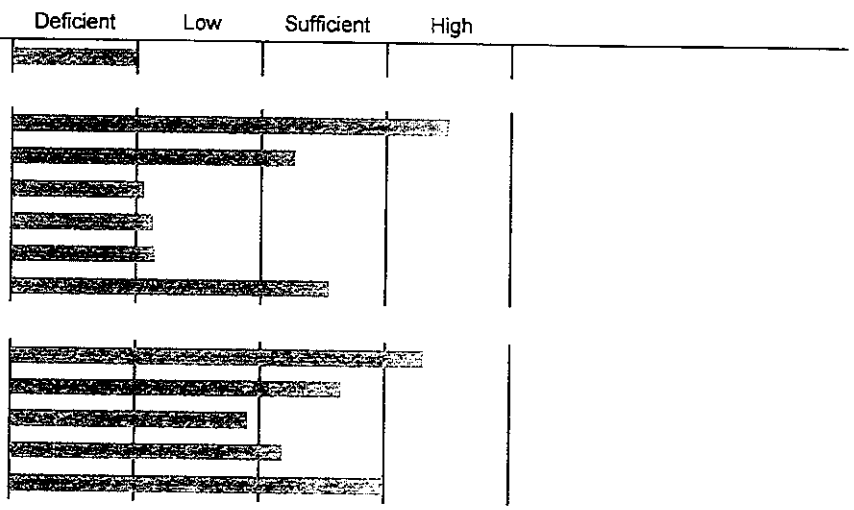
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4503

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT6

Extraction Method: Mehlich 3

	Analysis
pH	5.5
Buffer pH	6.8
Phosphorus, ppm P	189
P Saturation	32
Potassium, ppm K	49
Calcium, ppm Ca	287
Magnesium, ppm Mg	38
Sodium, ppm Na	16
CEC Sum of Cations, meq/100g	2.6
H % Saturation	26
K % Saturation	5
Ca % Saturation	54
Mg % Saturation	12
Na % Saturation	3
Organic Matter, %	1.7
Est. Organic Carbon, %	0.97

Sufficiency Levels



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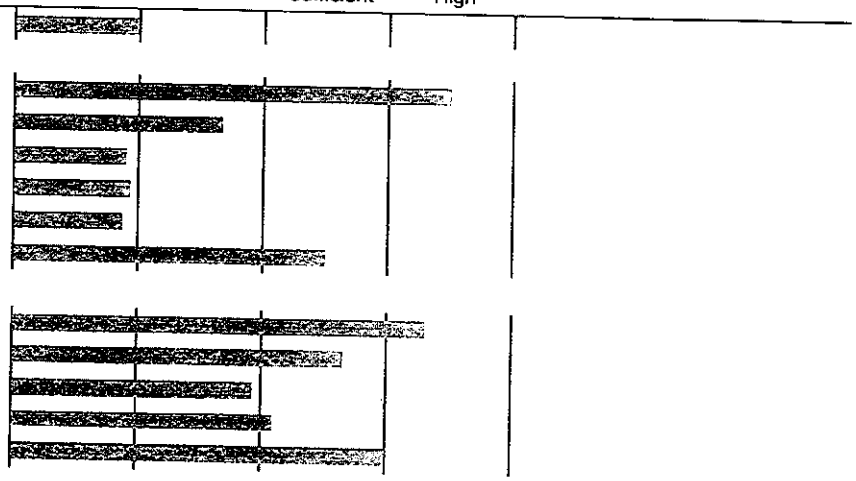
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4504

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT7

Extraction Method: Mehlich 3

	Analysis
pH	5.5
Buffer pH	6.9
Phosphorus, ppm P	114
P Saturation	17
Potassium, ppm K	42
Calcium, ppm Ca	235
Magnesium, ppm Mg	29
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	2.1
H % Saturation	26
K % Saturation	5
Ca % Saturation	55
Mg % Saturation	11
Na % Saturation	3
Organic Matter, %	2.5
Est. Organic Carbon, %	1.46

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4505

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT8

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.7				
Phosphorus, ppm P	266				
P Saturation	48				
Potassium, ppm K	90				
Calcium, ppm Ca	565				
Magnesium, ppm Mg	56				
Sodium, ppm Na	16				
CEC Sum of Cations, meq/100g	4.6				
H % Saturation	22				
K % Saturation	5				
Ca % Saturation	61				
Mg % Saturation	10				
Na % Saturation	2				
Organic Matter, %	2.3				
Est. Organic Carbon, %	1.35				

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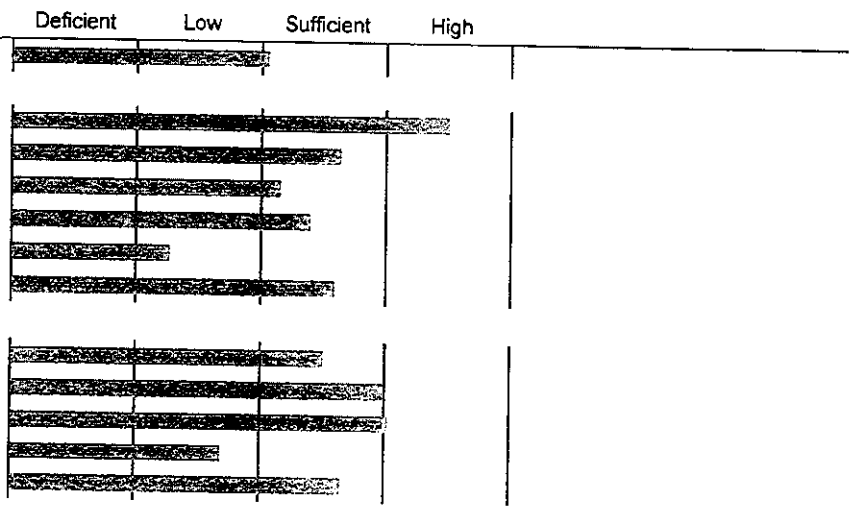
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4506

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT9

Extraction Method: Mehlich 3

	Analysis
pH	6.0
Buffer pH	6.8
Phosphorus, ppm P	274
P Saturation	41
Potassium, ppm K	105
Calcium, ppm Ca	697
Magnesium, ppm Mg	42
Sodium, ppm Na	17
CEC Sum of Cations, meq/100g	4.9
H % Saturation	14
K % Saturation	6
Ca % Saturation	71
Mg % Saturation	7
Na % Saturation	2
Organic Matter, %	2.5
Est. Organic Carbon, %	1.45

Sufficiency Levels



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Soil Analysis Report

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MARDELA SPRINGS MD 21837

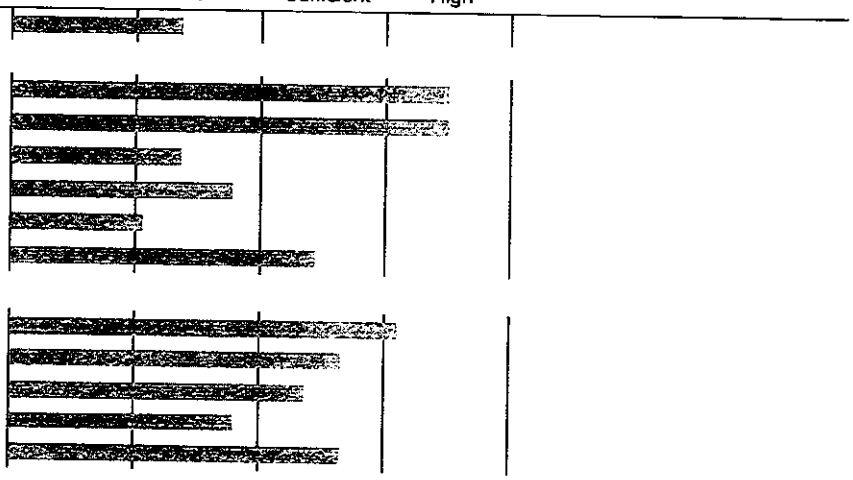
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4507

Results For : CALLOWAY BROTHERS
Location : CATLIN
Sample ID : CAT10

Extraction Method: Mehlich 3

	Analysis
pH	5.7
Buffer pH	6.8
Phosphorus, ppm P	290
P Saturation	62
Potassium, ppm K	63
Calcium, ppm Ca	446
Magnesium, ppm Mg	35
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.5
H % Saturation	22
K % Saturation	5
Ca % Saturation	63
Mg % Saturation	8
Na % Saturation	2
Organic Matter, %	1.6
Est. Organic Carbon, %	0.90

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4515

Results For : CALLOWAY BROTHERS
Location : LEONARD DIETZ
Sample ID : LD1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.1				
Buffer pH	6.5				
Phosphorus, ppm P	95				
P Saturation	25				
Potassium, ppm K	75				
Calcium, ppm Ca	436				
Magnesium, ppm Mg	85				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	5.2				
H % Saturation	40				
K % Saturation	4				
Ca % Saturation	42				
Mg % Saturation	13				
Na % Saturation	1				
Organic Matter, %	2.8				
Est. Organic Carbon, %	1.62				

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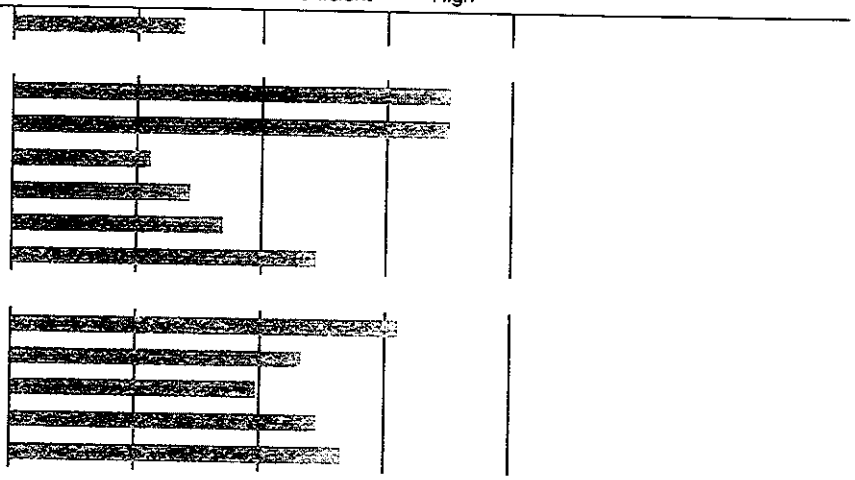
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4588

Results For : CALLOWAY BROTHERS
Location : WILL DYER
Sample ID : ~~WDP~~ WD1A, WD1B

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.7	
Buffer pH	6.8	
Phosphorus, ppm P	434	
P Saturation	89	
Potassium, ppm K	51	
Calcium, ppm Ca	357	
Magnesium, ppm Mg	56	
Sodium, ppm Na	14	
CEC Sum of Cations, meq/100g	3.1	
H % Saturation	22	
K % Saturation	4	
Ca % Saturation	57	
Mg % Saturation	15	
Na % Saturation	2	
Organic Matter, %	1.3	
Est. Organic Carbon, %	0.76	



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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3317

Results For : CALLOWAY BROTHERS
Location : JOHN EDWARDS
Sample ID : JE3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.87				
Phosphorus, ppm P	177				
P Saturation	31				
Potassium, ppm K	176				
Calcium, ppm Ca	347				
Magnesium, ppm Mg	102				
Sodium, ppm Na	2				
CEC Sum of Cations, meq/100g	3.6				
H % Saturation	15				
K % Saturation	13				
Ca % Saturation	48				
Mg % Saturation	24				
Na % Saturation	0				
Organic Matter, %	2.10				
Est. Organic Carbon, %	1.22				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3318

Results For : CALLOWAY BROTHERS
Location : JOHN EDWARDS
Sample ID : JE5

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.2				
Buffer pH	6.89				
Phosphorus, ppm P	323				
P Saturation	55				
Potassium, ppm K	97				
Calcium, ppm Ca	134				
Magnesium, ppm Mg	17				
Sodium, ppm Na	2				
CEC Sum of Cations, meq/100g	1.6				
H % Saturation	34				
K % Saturation	15				
Ca % Saturation	41				
Mg % Saturation	9				
Na % Saturation	1				
Organic Matter, %	1.77				
Est. Organic Carbon, %	1.03				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3319

Results For : CALLOWAY BROTHERS
Location : JOHN EDWARDS
Sample ID : JE6

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.9	
Buffer pH	6.87	
Phosphorus, ppm P	224	
P Saturation	33	
Potassium, ppm K	95	
Calcium, ppm Ca	337	
Magnesium, ppm Mg	58	
Sodium, ppm Na	3	
CEC Sum of Cations, meq/100g	2.9	
H % Saturation	17	
K % Saturation	8	
Ca % Saturation	58	
Mg % Saturation	16	
Na % Saturation	0	
Organic Matter, %	1.79	
Est. Organic Carbon, %	1.04	

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3320

Results For : CALLOWAY BROTHERS
Location : JOHN EDWARDS
Sample ID : JE7+8

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.83				
Phosphorus, ppm P	166				
P Saturation	37				
Potassium, ppm K	65				
Calcium, ppm Ca	247				
Magnesium, ppm Mg	51				
Sodium, ppm Na	3				
CEC Sum of Cations, meq/100g	2.5				
H % Saturation	27				
K % Saturation	7				
Ca % Saturation	48				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	2.23				
Est. Organic Carbon, %	1.29				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4476

Results For : CALLOWAY BROTHERS
Location : ROBERT EICHELBERGER
Sample ID : RE1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.4				
Buffer pH	6.8				
Phosphorus, ppm P	392				
P Saturation	99				
Potassium, ppm K	38				
Calcium, ppm Ca	710				
Magnesium, ppm Mg	108				
Sodium, ppm Na	17				
CEC Sum of Cations, meq/100g	5.1				
H % Saturation	9				
K % Saturation	2				
Ca % Saturation	70				
Mg % Saturation	18				
Na % Saturation	1				
Organic Matter, %	1.5				
Est. Organic Carbon, %	0.86				

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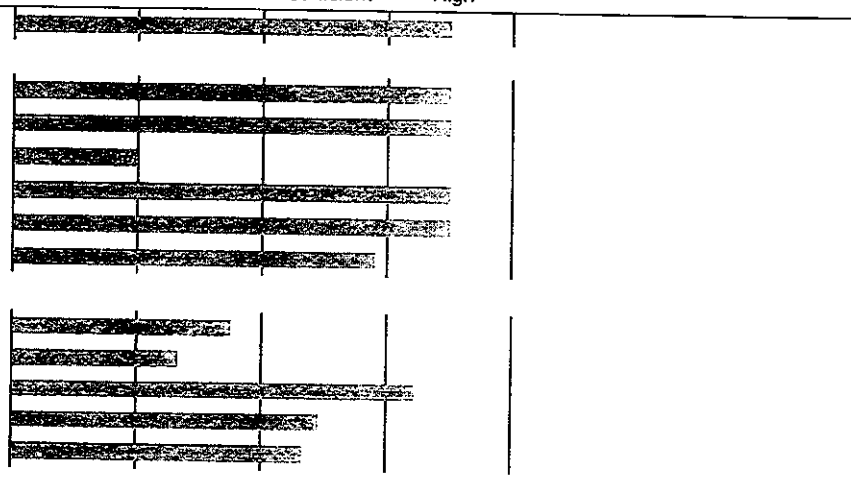
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4477

Results For : CALLOWAY BROTHERS
Location : ROBERT EICHELBERGER
Sample ID : RE2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.8	
Buffer pH	6.8	
Phosphorus, ppm P	782	
P Saturation	197	
Potassium, ppm K	46	
Calcium, ppm Ca	1419	
Magnesium, ppm Mg	161	
Sodium, ppm Na	23	
CEC Sum of Cations, meq/100g	9.2	
H % Saturation	6	
K % Saturation	1	
Ca % Saturation	77	
Mg % Saturation	15	
Na % Saturation	1	
Organic Matter, %	1.4	
Est. Organic Carbon, %	0.84	



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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3321

Results For : CALLOWAY BROTHERS
Location : TERRY FREED
Sample ID : GE1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.89				
Phosphorus, ppm P	147				
P Saturation	33				
Potassium, ppm K	56				
Calcium, ppm Ca	216				
Magnesium, ppm Mg	59				
Sodium, ppm Na	3				
CEC Sum of Cations, meq/100g	2.1				
H % Saturation	19				
K % Saturation	7				
Ca % Saturation	50				
Mg % Saturation	23				
Na % Saturation	1				
Organic Matter, %	2.01				
Est. Organic Carbon, %	1.17				

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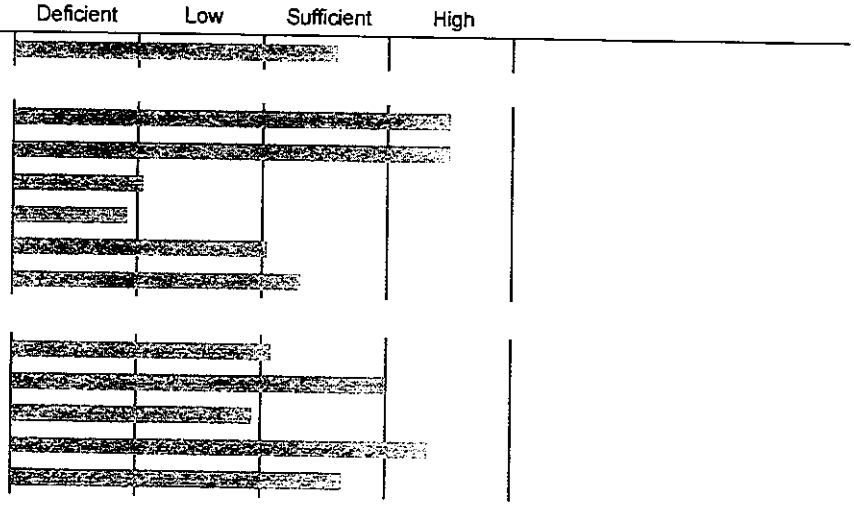
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40472

Results For : CALLOWAY BROTHERS
Location : ELIZABETH GLASGOW
Sample ID : EG1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.4	
Buffer pH	6.95	
Phosphorus, ppm P	174	
P Saturation	76	
Potassium, ppm K	48	
Calcium, ppm Ca	233	
Magnesium, ppm Mg	69	
Sodium, ppm Na	11	
CEC Sum of Cations, meq/100g	2.1	
H % Saturation	9	
K % Saturation	6	
Ca % Saturation	55	
Mg % Saturation	27	
Na % Saturation	2	
Organic Matter, %	0.33	
Est. Organic Carbon, %	0.19	



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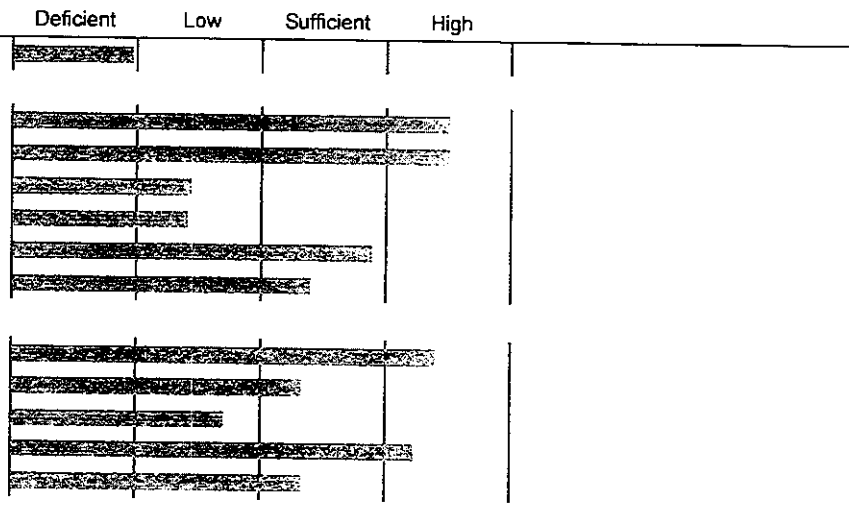
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40494

Results For : CALLOWAY BROTHERS
Location : HALES COLLINS
Sample ID : HBC1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.4
Buffer pH	6.71
Phosphorus, ppm P	204
P Saturation	59
Potassium, ppm K	66
Calcium, ppm Ca	355
Magnesium, ppm Mg	124
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	4.2
H % Saturation	28
K % Saturation	4
Ca % Saturation	42
Mg % Saturation	25
Na % Saturation	1
Organic Matter, %	1.79
Est. Organic Carbon, %	1.04



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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40495

Results For : CALLOWAY BROTHERS
Location : HALES COLLINS
Sample ID : ~~H~~ HBC2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.78				
Phosphorus, ppm P	177				
P Saturation	71				
Potassium, ppm K	31				
Calcium, ppm Ca	262				
Magnesium, ppm Mg	75				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.9				
H % Saturation	29				
K % Saturation	3				
Ca % Saturation	45				
Mg % Saturation	21				
Na % Saturation	2				
Organic Matter, %	0.69				
Est. Organic Carbon, %	0.40				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40496

Results For : CALLOWAY BROTHERS
Location : HALES GLASSGO
Sample ID : HG1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	7.1	
Buffer pH	7.00	
Phosphorus, ppm P	488	
P Saturation	138	
Potassium, ppm K	62	
Calcium, ppm Ca	1736	
Magnesium, ppm Mg	50	
Sodium, ppm Na	14	
CEC Sum of Cations, meq/100g	9.7	
H % Saturation	3	
K % Saturation	2	
Ca % Saturation	90	
Mg % Saturation	4	
Na % Saturation	1	
Organic Matter, %	1.35	
Est. Organic Carbon, %	0.78	

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40498

Results For : CALLOWAY BROTHERS
Location : HALES HOTTON
Sample ID : HH1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.6				
Buffer pH	6.80				
Phosphorus, ppm P	227				
P Saturation	83				
Potassium, ppm K	71				
Calcium, ppm Ca	360				
Magnesium, ppm Mg	57				
Sodium, ppm Na	16				
CEC Sum of Cations, meq/100g	3.3				
H % Saturation	23				
K % Saturation	6				
Ca % Saturation	55				
Mg % Saturation	14				
Na % Saturation	2				
Organic Matter, %	0.68				
Est. Organic Carbon, %	0.40				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40501

Results For : CALLOWAY BROTHERS
Location : HALES JENKINS TERRAPIN
Sample ID : HJT1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	4.7				
Buffer pH	6.60				
Phosphorus, ppm P	325				
P Saturation	108				
Potassium, ppm K	39				
Calcium, ppm Ca	226				
Magnesium, ppm Mg	38				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	3.4				
H % Saturation	53				
K % Saturation	3				
Ca % Saturation	33				
Mg % Saturation	9				
Na % Saturation	2				
Organic Matter, %	0.82				
Est. Organic Carbon, %	0.48				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40502

Results For : CALLOWAY BROTHERS
Location : HALES JENKINS TERRAPIN
Sample ID : HJT2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.0				
Buffer pH	6.60				
Phosphorus, ppm P	191				
P Saturation	73				
Potassium, ppm K	85				
Calcium, ppm Ca	368				
Magnesium, ppm Mg	73				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	4.7				
H % Saturation	42				
K % Saturation	5				
Ca % Saturation	39				
Mg % Saturation	13				
Na % Saturation	1				
Organic Matter, %	1.15				
Est. Organic Carbon, %	0.67				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40499

Results For : CALLOWAY BROTHERS
Location : HALES JENKINS WOR WIC
Sample ID : HJ1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.64				
Phosphorus, ppm P	699				
P Saturation	162				
Potassium, ppm K	70				
Calcium, ppm Ca	721				
Magnesium, ppm Mg	83				
Sodium, ppm Na	19				
CEC Sum of Cations, meq/100g	5.8				
H % Saturation	22				
K % Saturation	3				
Ca % Saturation	62				
Mg % Saturation	12				
Na % Saturation	1				
Organic Matter, %	0.79				
Est. Organic Carbon, %	0.46				

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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40500

Results For : CALLOWAY BROTHERS
Location : HALES JENKINS WOR WIC
Sample ID : HJ2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.9	
Buffer pH	6.68	
Phosphorus, ppm P	587	
P Saturation	128	
Potassium, ppm K	85	
Calcium, ppm Ca	910	
Magnesium, ppm Mg	138	
Sodium, ppm Na	17	
CEC Sum of Cations, meq/100g	7.1	
H % Saturation	16	
K % Saturation	3	
Ca % Saturation	64	
Mg % Saturation	16	
Na % Saturation	1	
Organic Matter, %	1.48	
Est. Organic Carbon, %	0.86	

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Soil Analysis Report

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MARDELA SPRINGS **MD** 21837

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40504

Results For : CALLOWAY BROTHERS
Location : HALES LOFFMAN
Sample ID : HWL1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.85				
Phosphorus, ppm P	257				
P Saturation	71				
Potassium, ppm K	117				
Calcium, ppm Ca	541				
Magnesium, ppm Mg	127				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	4.7				
H % Saturation	12				
K % Saturation	6				
Ca % Saturation	58				
Mg % Saturation	23				
Na % Saturation	1				
Organic Matter, %	1.01				
Est. Organic Carbon, %	0.58				

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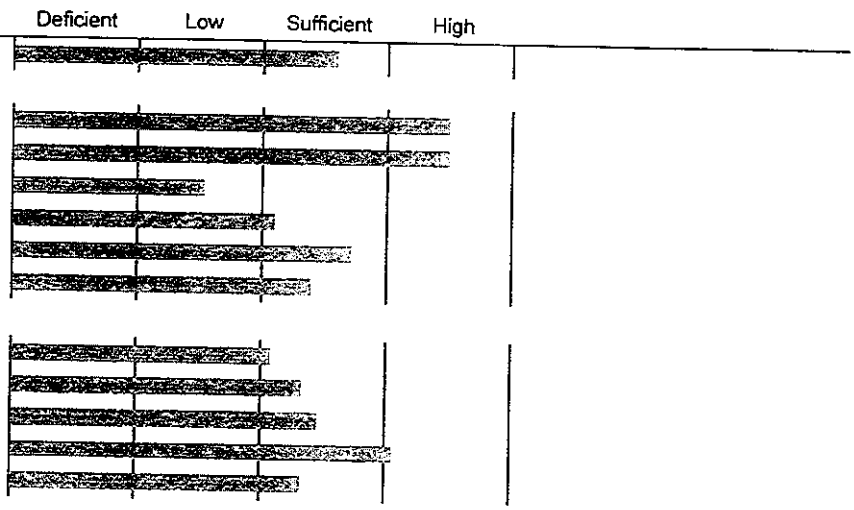
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40511

Results For : CALLOWAY BROTHERS
Location : HALES AG MALONE
Sample ID : ~~[illegible]~~ HM1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.4
Buffer pH	6.89
Phosphorus, ppm P	331
P Saturation	89
Potassium, ppm K	70
Calcium, ppm Ca	556
Magnesium, ppm Mg	113
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	4.3
H % Saturation	9
K % Saturation	4
Ca % Saturation	64
Mg % Saturation	22
Na % Saturation	1
Organic Matter, %	0.99
Est. Organic Carbon, %	0.58



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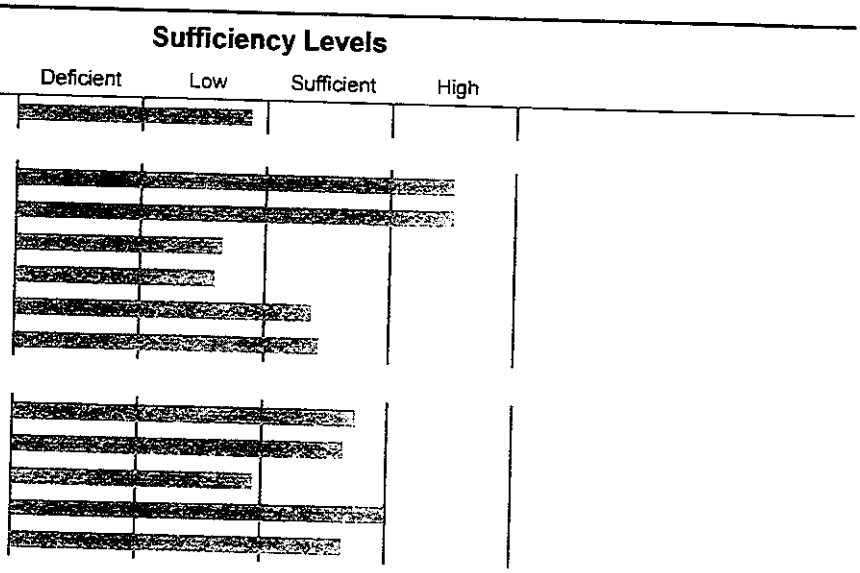
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40512

Results For : CALLOWAY BROTHERS
Location : HALES AG MALONE
Sample ID : [redacted] HM2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.9
Buffer pH	6.83
Phosphorus, ppm P	341
P Saturation	90
Potassium, ppm K	76
Calcium, ppm Ca	400
Magnesium, ppm Mg	91
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.6
H % Saturation	17
K % Saturation	5
Ca % Saturation	55
Mg % Saturation	21
Na % Saturation	2
Organic Matter, %	0.82
Est. Organic Carbon, %	0.48



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MARDELA SPRINGS **MD 21837**

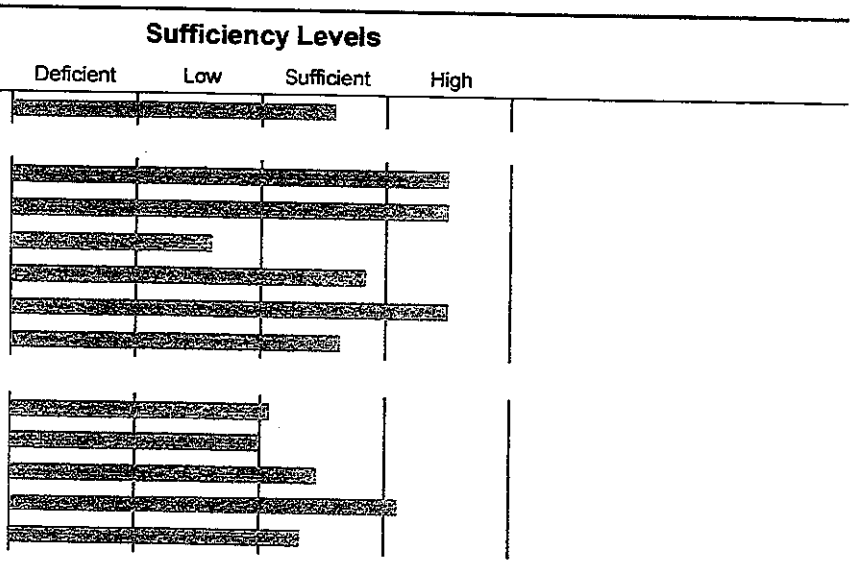
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40505

Results For : CALLOWAY BROTHERS
Location : HALES D[redacted] PACKING shed
Sample ID : [redacted] : HPS1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.4
Buffer pH	6.81
Phosphorus, ppm P	245
P Saturation	73
Potassium, ppm K	74
Calcium, ppm Ca	926
Magnesium, ppm Mg	200
Sodium, ppm Na	18
CEC Sum of Cations, meq/100g	7.2
H % Saturation	9
K % Saturation	3
Ca % Saturation	64
Mg % Saturation	23
Na % Saturation	1
Organic Matter, %	2.10
Est. Organic Carbon, %	1.22



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Soil Analysis Report

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RT 50 & 210 MILL STREET
SALISBURY MD 21801

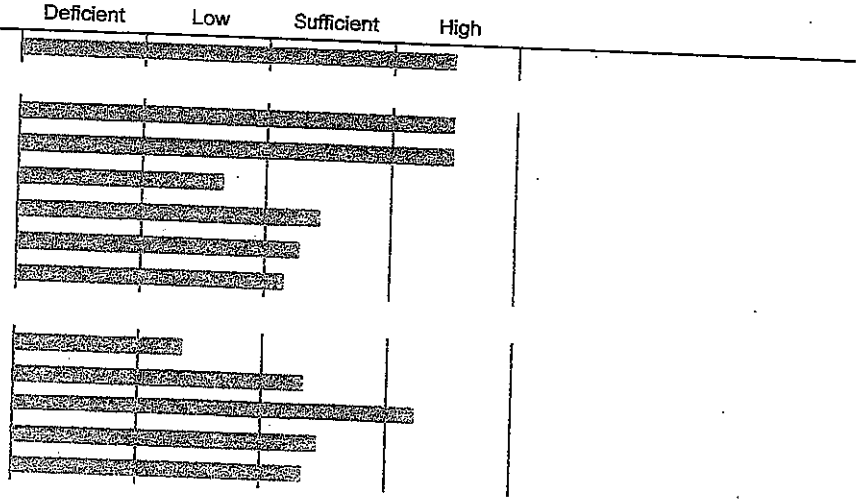
Invoice No. : 1147514
Date Received : 12/19/2023
Date Analyzed: 12/20/2023
Lab Number : 47303

Results For : Calloway Brothers
Location : Hales Packing SHED #1624-485
Sample ID : HPS2

Extraction Method: Mehlich 3

	Analysis
pH	7.3
Buffer pH	7.00
Phosphorus, ppm P	184
P Saturation	75
Potassium, ppm K	76
Calcium, ppm Ca	724
Magnesium, ppm Mg	84
Sodium, ppm Na	8
CEC Sum of Cations, meq/100g	4.7
H % Saturation	3
K % Saturation	4
Ca % Saturation	77
Mg % Saturation	15
Na % Saturation	1
Organic Matter, %	1.81
Est. Organic Carbon, %	1.05

Sufficiency Levels



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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

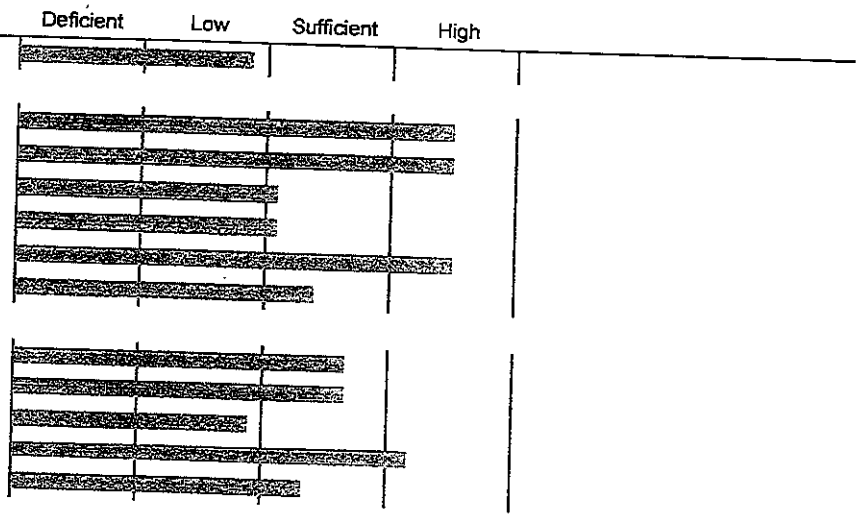
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40507

Results For : CALLOWAY BROTHERS
Location : ~~HALES DISHAROON PACK~~ 2 Hales Packing shed (left)
Sample ID : ~~HDP1K~~ HPL

Extraction Method: Mehlich 3

	Analysis
pH	5.9
Buffer pH	6.78
Phosphorus, ppm P	243
P Saturation	64
Potassium, ppm K	100
Calcium, ppm Ca	548
Magnesium, ppm Mg	149
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	5.1
H % Saturation	16
K % Saturation	5
Ca % Saturation	53
Mg % Saturation	24
Na % Saturation	1
Organic Matter, %	1.45
Est. Organic Carbon, %	0.84

Sufficiency Levels



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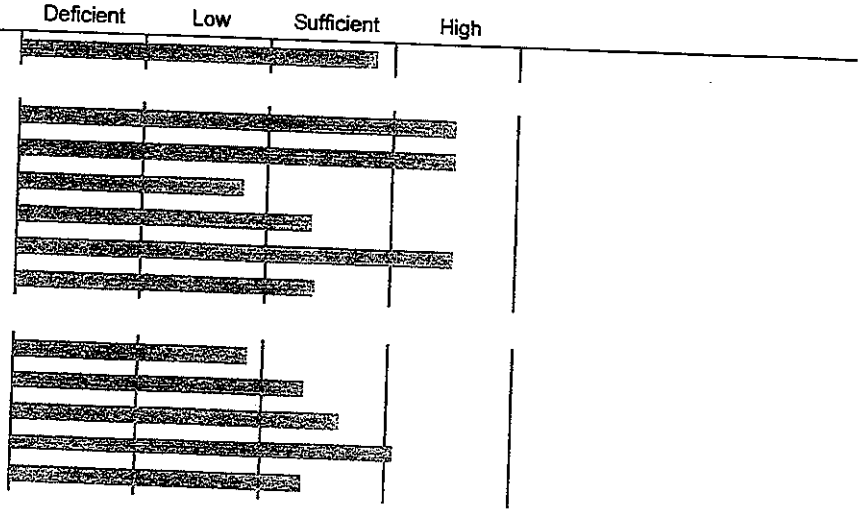
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40506

Results For : CALLOWAY BROTHERS
Location : ~~HALES DISTRIBUTION PACK~~ Hales Packing shed (Right)
Sample ID : ~~[illegible]~~ HPR

Extraction Method: Mehlich 3

	Analysis
pH	6.6
Buffer pH	6.89
Phosphorus, ppm P	227
P Saturation	72
Potassium, ppm K	83
Calcium, ppm Ca	687
Magnesium, ppm Mg	135
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	5.2
H % Saturation	7
K % Saturation	4
Ca % Saturation	66
Mg % Saturation	22
Na % Saturation	1
Organic Matter, %	1.08
Est. Organic Carbon, %	0.62

Sufficiency Levels



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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40508

Results For : CALLOWAY BROTHERS
Location : HALES PHILLIPS
Sample ID : HP1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	4.4				
Buffer pH	6.60				
Phosphorus, ppm P	72				
P Saturation	24				
Potassium, ppm K	56				
Calcium, ppm Ca	119				
Magnesium, ppm Mg	29				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.7				
H % Saturation	61				
K % Saturation	5				
Ca % Saturation	22				
Mg % Saturation	9				
Na % Saturation	2				
Organic Matter, %	1.72				
Est. Organic Carbon, %	1.00				

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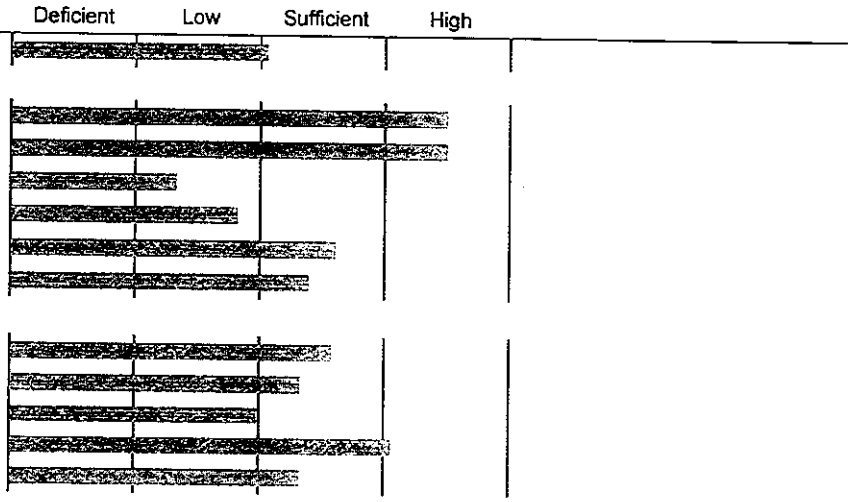
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40509

Results For : CALLOWAY BROTHERS
Location : HALES PUSEY
Sample ID : HEP1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.0
Buffer pH	6.84
Phosphorus, ppm P	308
P Saturation	87
Potassium, ppm K	61
Calcium, ppm Ca	457
Magnesium, ppm Mg	106
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	4.0
H % Saturation	15
K % Saturation	4
Ca % Saturation	58
Mg % Saturation	22
Na % Saturation	1
Organic Matter, %	0.88
Est. Organic Carbon, %	0.51



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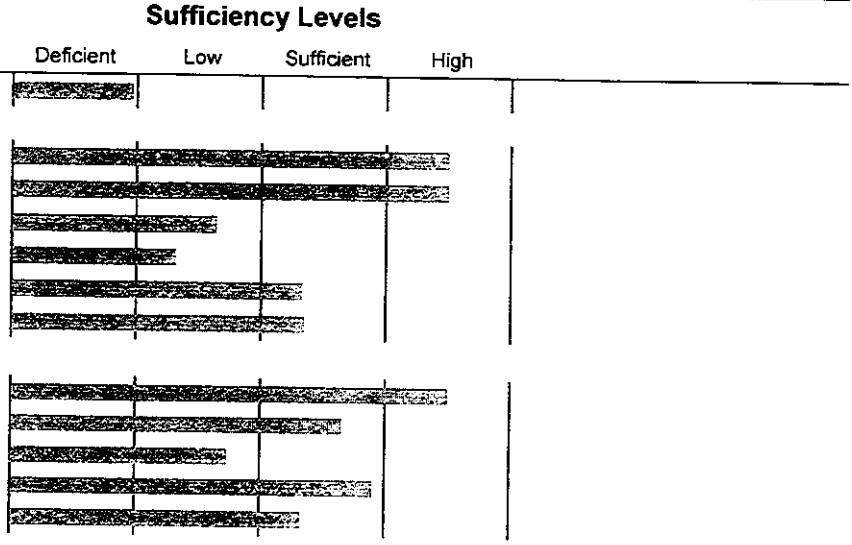
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40510

Results For : CALLOWAY BROTHERS
Location : HALES TOM HALL
Sample ID : HTH1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.4
Buffer pH	6.73
Phosphorus, ppm P	353
P Saturation	89
Potassium, ppm K	75
Calcium, ppm Ca	333
Magnesium, ppm Mg	88
Sodium, ppm Na	12
CEC Sum of Cations, meq/100g	3.8
H % Saturation	30
K % Saturation	5
Ca % Saturation	44
Mg % Saturation	20
Na % Saturation	1
Organic Matter, %	0.73
Est. Organic Carbon, %	0.42



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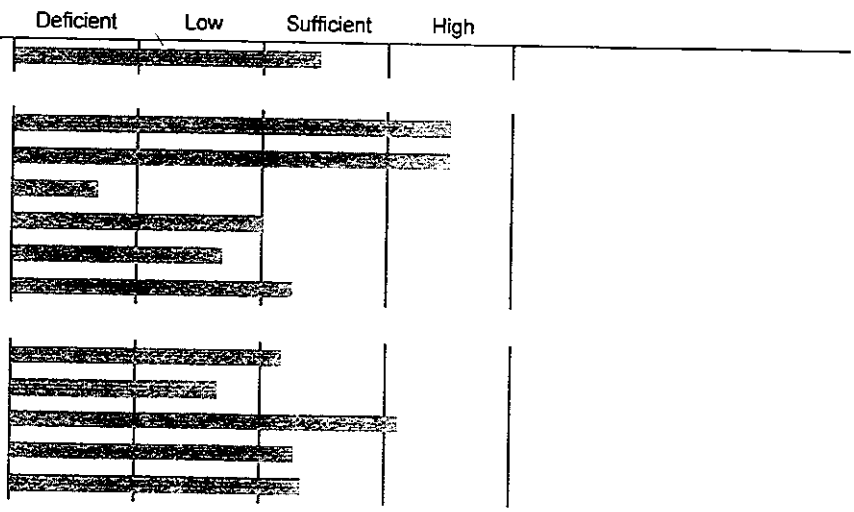
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40513

Results For : CALLOWAY BROTHERS
Location : HALES WALMART
Sample ID : [redacted] HWM1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.3
Buffer pH	6.89
Phosphorus, ppm P	178
P Saturation	92
Potassium, ppm K	32
Calcium, ppm Ca	509
Magnesium, ppm Mg	56
Sodium, ppm Na	10
CEC Sum of Cations, meq/100g	3.5
H % Saturation	10
K % Saturation	2
Ca % Saturation	73
Mg % Saturation	13
Na % Saturation	1
Organic Matter, %	0.44
Est. Organic Carbon, %	0.25



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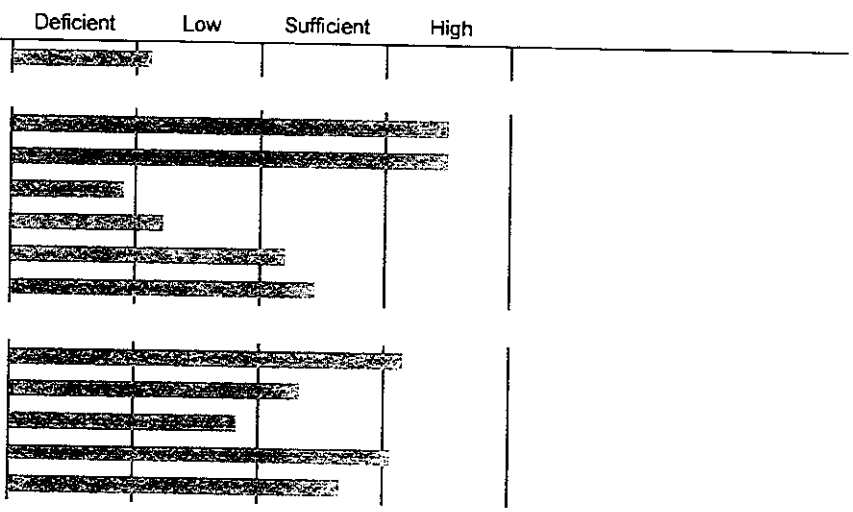
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40514

Results For : CALLOWAY BROTHERS
Location : HALES WALMART
Sample ID : [redacted] HWM2

Extraction Method: Mehlich 3

	Analysis
pH	5.6
Buffer pH	6.82
Phosphorus, ppm P	193
P Saturation	76
Potassium, ppm K	42
Calcium, ppm Ca	307
Magnesium, ppm Mg	79
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.0
H % Saturation	23
K % Saturation	4
Ca % Saturation	49
Mg % Saturation	22
Na % Saturation	2
Organic Matter, %	0.52
Est. Organic Carbon, %	0.30

Sufficiency Levels



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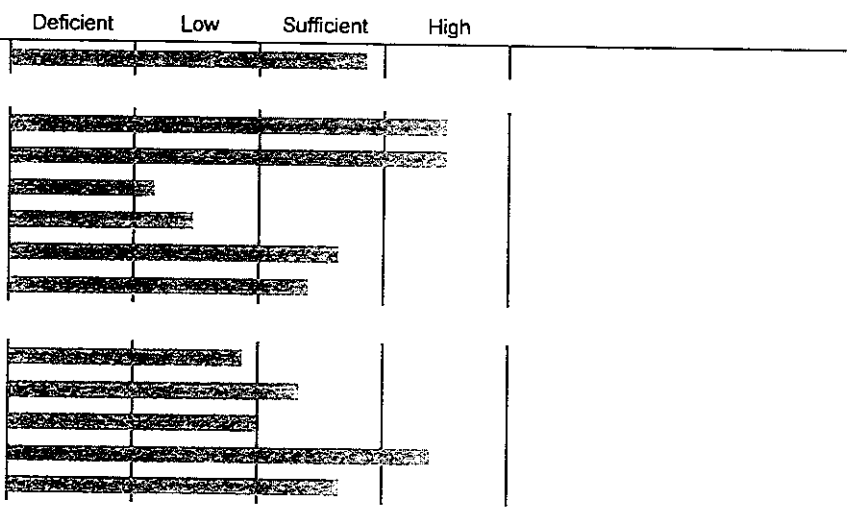
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40515

Results For : CALLOWAY BROTHERS
Location : HALES POLY WATSON
Sample ID : HPW1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.6
Buffer pH	6.94
Phosphorus, ppm P	187
P Saturation	83
Potassium, ppm K	54
Calcium, ppm Ca	371
Magnesium, ppm Mg	108
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	3.2
H % Saturation	7
K % Saturation	4
Ca % Saturation	59
Mg % Saturation	28
Na % Saturation	2
Organic Matter, %	0.72
Est. Organic Carbon, %	0.42



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Soil Analysis Report

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4482

Results For : CALLOWAY BROTHERS
Location : FAYE HATTON
Sample ID : FH1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	4.9				
Buffer pH	6.6				
Phosphorus, ppm P	325				
P Saturation	78				
Potassium, ppm K	45				
Calcium, ppm Ca	139				
Magnesium, ppm Mg	29				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.0				
H % Saturation	43				
K % Saturation	6				
Ca % Saturation	35				
Mg % Saturation	12				
Na % Saturation	3				
Organic Matter, %	1.3				
Est. Organic Carbon, %	0.77				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

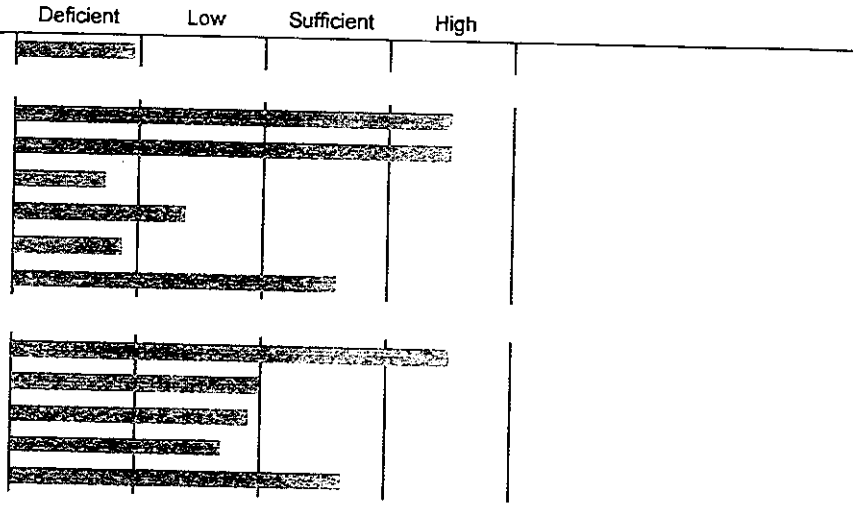
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4483

Results For : CALLOWAY BROTHERS
Location : FAYE HATTON
Sample ID : FH2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.3
Buffer pH	6.7
Phosphorus, ppm P	307
P Saturation	107
Potassium, ppm K	34
Calcium, ppm Ca	346
Magnesium, ppm Mg	29
Sodium, ppm Na	17
CEC Sum of Cations, meq/100g	3.2
H % Saturation	33
K % Saturation	3
Ca % Saturation	54
Mg % Saturation	7
Na % Saturation	2
Organic Matter, %	0.9
Est. Organic Carbon, %	0.50



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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4496

Results For : CALLOWAY BROTHERS
Location : BRYAN HENSLEY
Sample ID : HN1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.9				
Buffer pH	6.9				
Phosphorus, ppm P	140				
P Saturation	43				
Potassium, ppm K	61				
Calcium, ppm Ca	262				
Magnesium, ppm Mg	105				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	2.9				
H % Saturation	16				
K % Saturation	6				
Ca % Saturation	46				
Mg % Saturation	30				
Na % Saturation	2				
Organic Matter, %	1.4				
Est. Organic Carbon, %	0.79				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4449

Results For : CALLOWAY BROTHERS
Location : BRYAN HENSLEY
Sample ID : HN2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.8				
Phosphorus, ppm P	235				
P Saturation	50				
Potassium, ppm K	150				
Calcium, ppm Ca	613				
Magnesium, ppm Mg	168				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	5.5				
H % Saturation	11				
K % Saturation	7				
Ca % Saturation	55				
Mg % Saturation	26				
Na % Saturation	1				
Organic Matter, %	2.2				
Est. Organic Carbon, %	1.25				

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MARDELA SPRINGS **MD 21837**

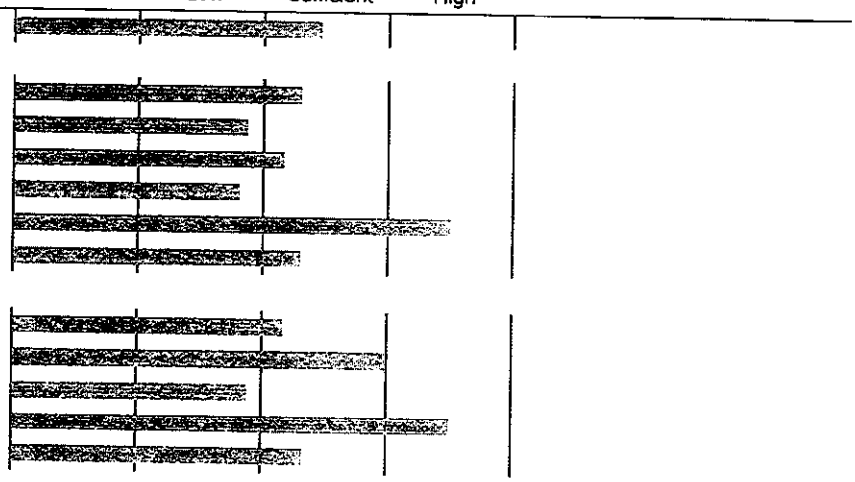
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4450

Results For : CALLOWAY BROTHERS
Location : BRYAN HENSLEY
Sample ID : HN3

Extraction Method: Mehlich 3

	Analysis
pH	6.3
Buffer pH	6.9
Phosphorus, ppm P	65
P Saturation	22
Potassium, ppm K	106
Calcium, ppm Ca	454
Magnesium, ppm Mg	155
Sodium, ppm Na	11
CEC Sum of Cations, meq/100g	4.3
H % Saturation	10
K % Saturation	6
Ca % Saturation	53
Mg % Saturation	30
Na % Saturation	1
Organic Matter, %	2.1
Est. Organic Carbon, %	1.23

Sufficiency Levels



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MARDELA SPRINGS **MD 21837**

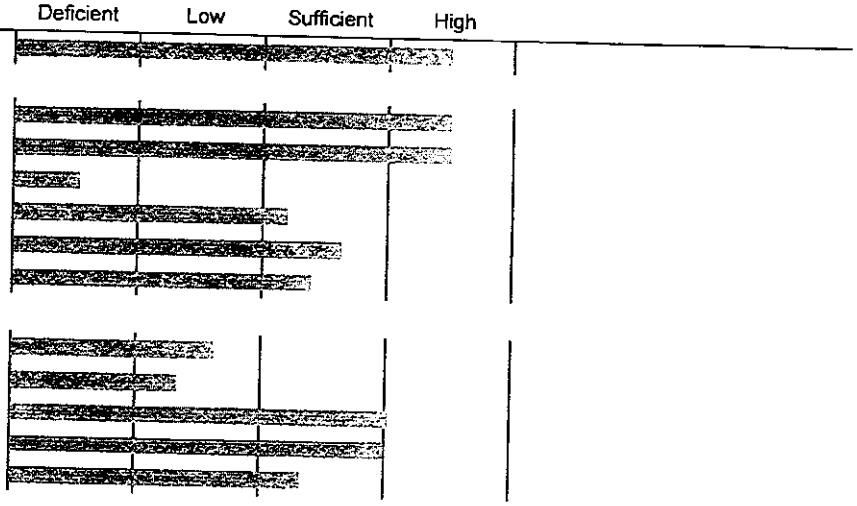
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4451

Results For : CALLOWAY BROTHERS
Location : BILL HOCHMUTH
Sample ID : BH1

Extraction Method: Mehlich 3

	Analysis
pH	6.8
Buffer pH	6.9
Phosphorus, ppm P	244
P Saturation	72
Potassium, ppm K	25
Calcium, ppm Ca	602
Magnesium, ppm Mg	108
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	4.2
H % Saturation	5
K % Saturation	1
Ca % Saturation	71
Mg % Saturation	21
Na % Saturation	1
Organic Matter, %	1.1
Est. Organic Carbon, %	0.65

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4452

Results For : CALLOWAY BROTHERS
Location : BILL HOCHMUTH
Sample ID : BH2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.7	
Buffer pH	6.9	
Phosphorus, ppm P	263	
P Saturation	73	
Potassium, ppm K	32	
Calcium, ppm Ca	321	
Magnesium, ppm Mg	64	
Sodium, ppm Na	13	
CEC Sum of Cations, meq/100g	2.4	
H % Saturation	6	
K % Saturation	3	
Ca % Saturation	66	
Mg % Saturation	22	
Na % Saturation	2	
Organic Matter, %	0.6	
Est. Organic Carbon, %	0.37	

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3327

Results For : CALLOWAY BROTHERS
Location : PAT HOCHMUTH
Sample ID : PH1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	4.7				
Buffer pH	6.60				
Phosphorus, ppm P	404				
P Saturation	84				
Potassium, ppm K	22				
Calcium, ppm Ca	40				
Magnesium, ppm Mg	6				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	0.7				
H % Saturation	52				
K % Saturation	8				
Ca % Saturation	28				
Mg % Saturation	7				
Na % Saturation	5				
Organic Matter, %	1.33				
Est. Organic Carbon, %	0.77				

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Soil Analysis Report

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40473

Results For : CALLOWAY BROTHERS
Location : PAT HOCHMUTH
Sample ID : PH2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.85				
Phosphorus, ppm P	308				
P Saturation	77				
Potassium, ppm K	54				
Calcium, ppm Ca	139				
Magnesium, ppm Mg	101				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.4				
H % Saturation	27				
K % Saturation	6				
Ca % Saturation	29				
Mg % Saturation	35				
Na % Saturation	3				
Organic Matter, %	0.70				
Est. Organic Carbon, %	0.41				

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Soil Analysis Report

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40474

Results For : CALLOWAY BROTHERS
Location : PAT HOCHMUTH
Sample ID : PH3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.81				
Phosphorus, ppm P	399				
P Saturation	84				
Potassium, ppm K	32				
Calcium, ppm Ca	166				
Magnesium, ppm Mg	181				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	3.3				
H % Saturation	25				
K % Saturation	2				
Ca % Saturation	25				
Mg % Saturation	45				
Na % Saturation	2				
Organic Matter, %	0.75				
Est. Organic Carbon, %	0.44				

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Soil Analysis Report

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3330

Results For : CALLOWAY BROTHERS
Location : PAT HOCHMUTH
Sample ID : PH4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.90				
Phosphorus, ppm P	378				
P Saturation	82				
Potassium, ppm K	23				
Calcium, ppm Ca	78				
Magnesium, ppm Mg	60				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	1.4				
H % Saturation	30				
K % Saturation	4				
Ca % Saturation	28				
Mg % Saturation	35				
Na % Saturation	3				
Organic Matter, %	1.22				
Est. Organic Carbon, %	0.71				

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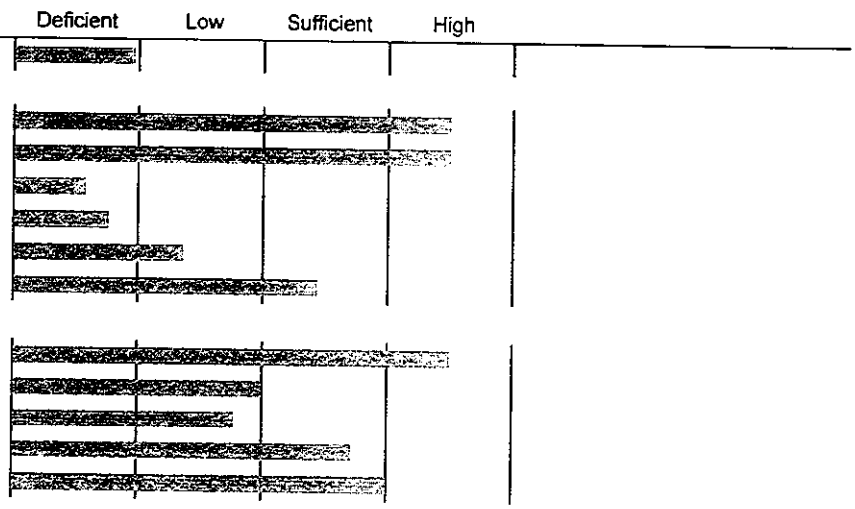
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4453

Results For : CALLOWAY BROTHERS
Location : PAT HOCHMUTH
Sample ID : ~~PH5~~ PH5A,PH5B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.4
Buffer pH	6.8
Phosphorus, ppm P	535
P Saturation	89
Potassium, ppm K	27
Calcium, ppm Ca	193
Magnesium, ppm Mg	45
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	2.1
H % Saturation	30
K % Saturation	3
Ca % Saturation	46
Mg % Saturation	18
Na % Saturation	3
Organic Matter, %	1.3
Est. Organic Carbon, %	0.76



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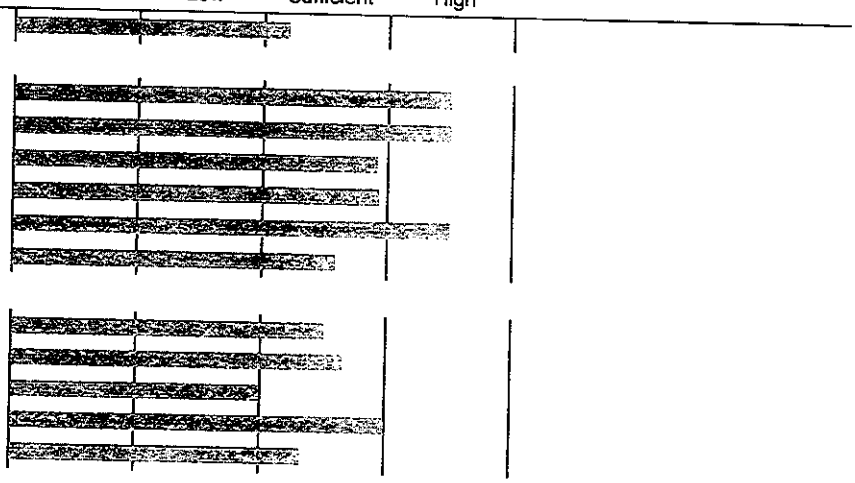
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4454

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H1

Extraction Method: Mehlich 3

	Analysis
pH	6.1
Buffer pH	6.7
Phosphorus, ppm P	482
P Saturation	106
Potassium, ppm K	175
Calcium, ppm Ca	970
Magnesium, ppm Mg	209
Sodium, ppm Na	17
CEC Sum of Cations, meq/100g	8.3
H % Saturation	14
K % Saturation	5
Ca % Saturation	59
Mg % Saturation	21
Na % Saturation	1
Organic Matter, %	3.8
Est. Organic Carbon, %	2.21

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4455

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.8				
Phosphorus, ppm P	268				
P Saturation	52				
Potassium, ppm K	150				
Calcium, ppm Ca	632				
Magnesium, ppm Mg	129				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	5.2				
H % Saturation	11				
K % Saturation	7				
Ca % Saturation	60				
Mg % Saturation	20				
Na % Saturation	1				
Organic Matter, %	2.3				
Est. Organic Carbon, %	1.34				

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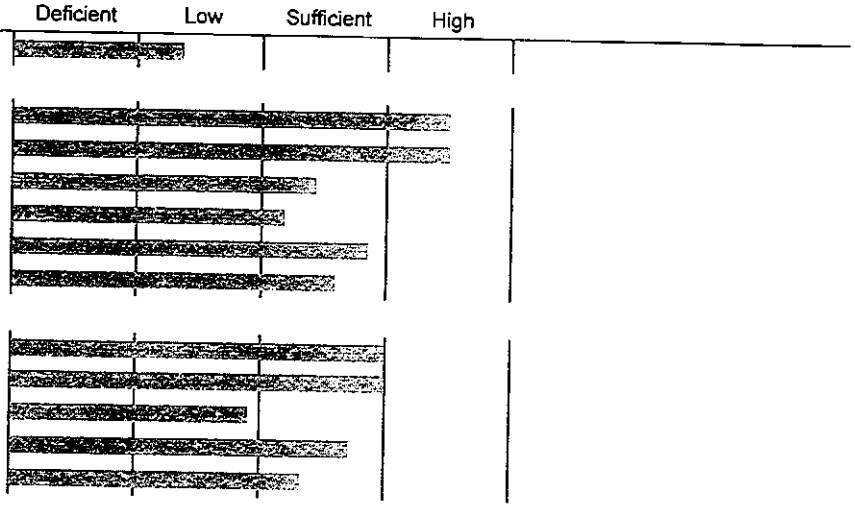
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4456

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H3

Extraction Method: Mehlich 3

	Analysis
pH	5.7
Buffer pH	6.7
Phosphorus, ppm P	325
P Saturation	57
Potassium, ppm K	131
Calcium, ppm Ca	589
Magnesium, ppm Mg	122
Sodium, ppm Na	17
CEC Sum of Cations, meq/100g	5.5
H % Saturation	20
K % Saturation	6
Ca % Saturation	54
Mg % Saturation	18
Na % Saturation	1
Organic Matter, %	3.2
Est. Organic Carbon, %	1.86

Sufficiency Levels



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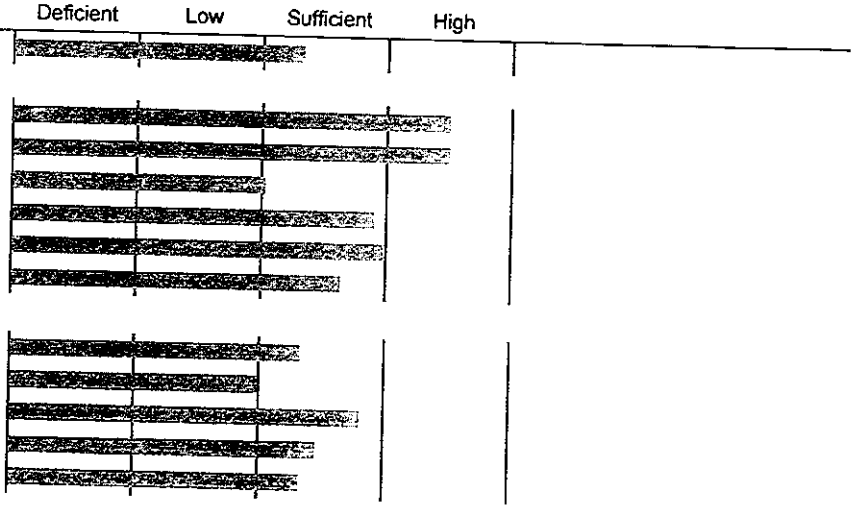
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4457

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H4

Extraction Method: Mehlich 3

	Analysis
pH	6.2
Buffer pH	6.8
Phosphorus, ppm P	617
P Saturation	109
Potassium, ppm K	94
Calcium, ppm Ca	951
Magnesium, ppm Mg	130
Sodium, ppm Na	18
CEC Sum of Cations, meq/100g	7.0
H % Saturation	12
K % Saturation	3
Ca % Saturation	68
Mg % Saturation	15
Na % Saturation	1
Organic Matter, %	2.1
Est. Organic Carbon, %	1.24

Sufficiency Levels



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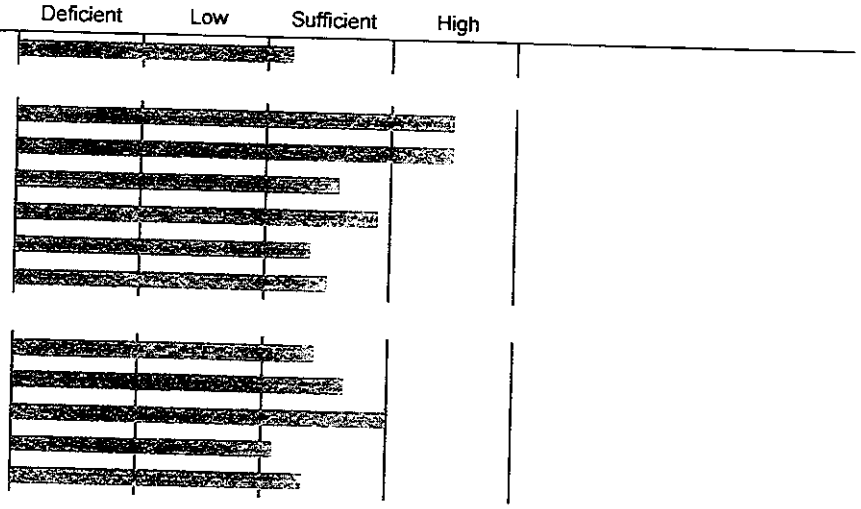
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4458

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H5

Extraction Method: Mehlich 3

	Analysis
pH	6.1
Buffer pH	6.7
Phosphorus, ppm P	756
P Saturation	113
Potassium, ppm K	146
Calcium, ppm Ca	952
Magnesium, ppm Mg	90
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	6.8
H % Saturation	13
K % Saturation	5
Ca % Saturation	70
Mg % Saturation	11
Na % Saturation	1
Organic Matter, %	2.0
Est. Organic Carbon, %	1.14

Sufficiency Levels



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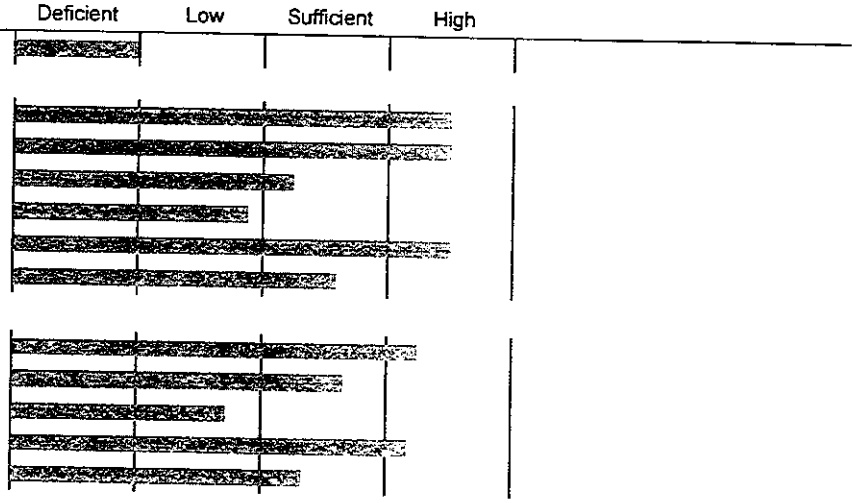
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4459

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H7

Extraction Method: Mehlich 3

	Analysis
pH	5.5
Buffer pH	6.7
Phosphorus, ppm P	722
P Saturation	103
Potassium, ppm K	114
Calcium, ppm Ca	473
Magnesium, ppm Mg	160
Sodium, ppm Na	17
CEC Sum of Cations, meq/100g	5.5
H % Saturation	25
K % Saturation	5
Ca % Saturation	43
Mg % Saturation	24
Na % Saturation	1
Organic Matter, %	2.8
Est. Organic Carbon, %	1.60

Sufficiency Levels



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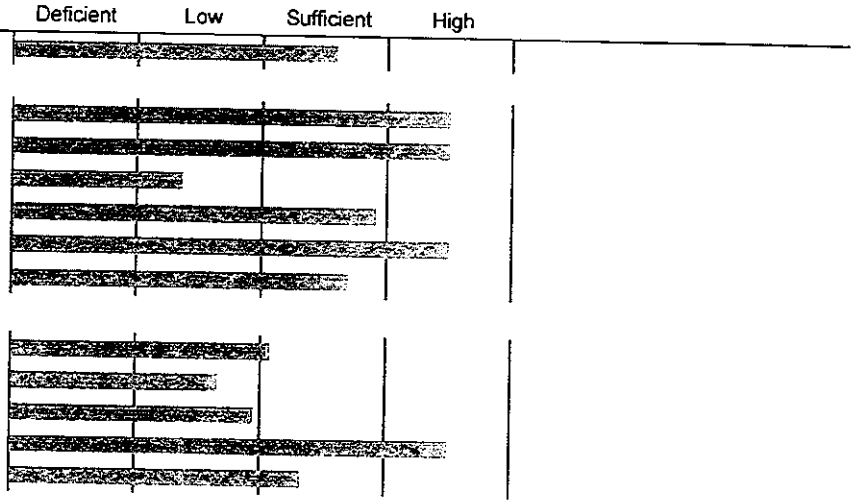
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4460

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H8

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.4
Buffer pH	6.8
Phosphorus, ppm P	531
P Saturation	97
Potassium, ppm K	63
Calcium, ppm Ca	959
Magnesium, ppm Mg	332
Sodium, ppm Na	19
CEC Sum of Cations, meq/100g	8.5
H % Saturation	9
K % Saturation	2
Ca % Saturation	56
Mg % Saturation	32
Na % Saturation	1
Organic Matter, %	2.6
Est. Organic Carbon, %	1.48



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Soil Analysis Report

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Invoice No. : I148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3335

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H9

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.6	
Buffer pH	6.81	
Phosphorus, ppm P	628	
P Saturation	117	
Potassium, ppm K	86	
Calcium, ppm Ca	338	
Magnesium, ppm Mg	59	
Sodium, ppm Na	8	
CEC Sum of Cations, meq/100g	3.2	
H % Saturation	23	
K % Saturation	7	
Ca % Saturation	53	
Mg % Saturation	15	
Na % Saturation	1	
Organic Matter, %	2.05	
Est. Organic Carbon, %	1.19	

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

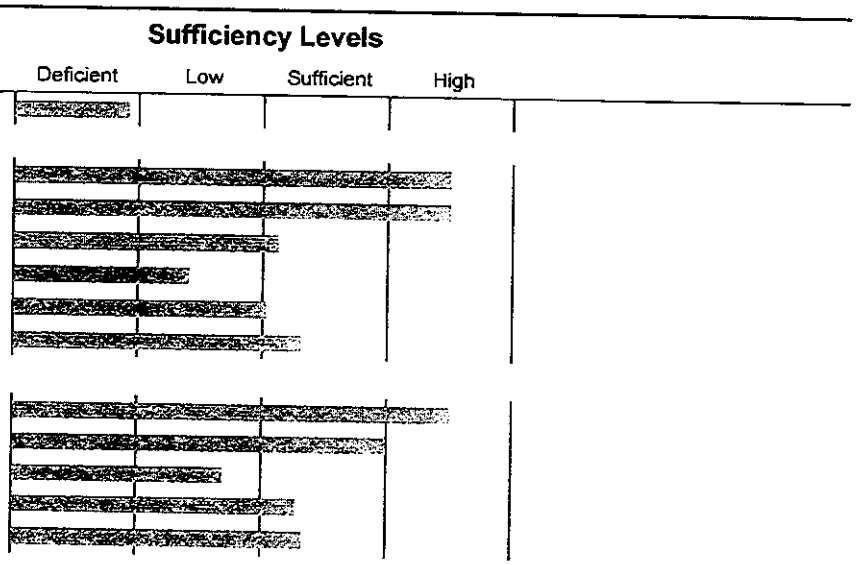
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40475

Results For : CALLOWAY BROTHERS
Location : HOME FARM
Sample ID : H11

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.1
Buffer pH	6.61
Phosphorus, ppm P	652
P Saturation	106
Potassium, ppm K	102
Calcium, ppm Ca	356
Magnesium, ppm Mg	68
Sodium, ppm Na	11
CEC Sum of Cations, meq/100g	4.3
H % Saturation	39
K % Saturation	6
Ca % Saturation	41
Mg % Saturation	13
Na % Saturation	1
Organic Matter, %	1.35
Est. Organic Carbon, %	0.78



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Soil Analysis Report

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4463

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H12

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.4				
Buffer pH	6.8				
Phosphorus, ppm P	613				
P Saturation	111				
Potassium, ppm K	145				
Calcium, ppm Ca	1084				
Magnesium, ppm Mg	171				
Sodium, ppm Na	19				
CEC Sum of Cations, meq/100g	8.0				
H % Saturation	9				
K % Saturation	5				
Ca % Saturation	67				
Mg % Saturation	18				
Na % Saturation	1				
Organic Matter, %	2.3				
Est. Organic Carbon, %	1.33				

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Soil Analysis Report

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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40476

Results For : CALLOWAY BROTHERS
Location : HOME FARM
Sample ID : H13

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.87				
Phosphorus, ppm P	366				
P Saturation	105				
Potassium, ppm K	54				
Calcium, ppm Ca	747				
Magnesium, ppm Mg	172				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	5.8				
H % Saturation	7				
K % Saturation	2				
Ca % Saturation	65				
Mg % Saturation	25				
Na % Saturation	1				
Organic Matter, %	1.10				
Est. Organic Carbon, %	0.64				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4465

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H14

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.8				
Phosphorus, ppm P	510				
P Saturation	107				
Potassium, ppm K	116				
Calcium, ppm Ca	496				
Magnesium, ppm Mg	84				
Sodium, ppm Na	16				
CEC Sum of Cations, meq/100g	4.3				
H % Saturation	18				
K % Saturation	7				
Ca % Saturation	57				
Mg % Saturation	16				
Na % Saturation	2				
Organic Matter, %	1.5				
Est. Organic Carbon, %	0.89				

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MARDELA SPRINGS MD 21837

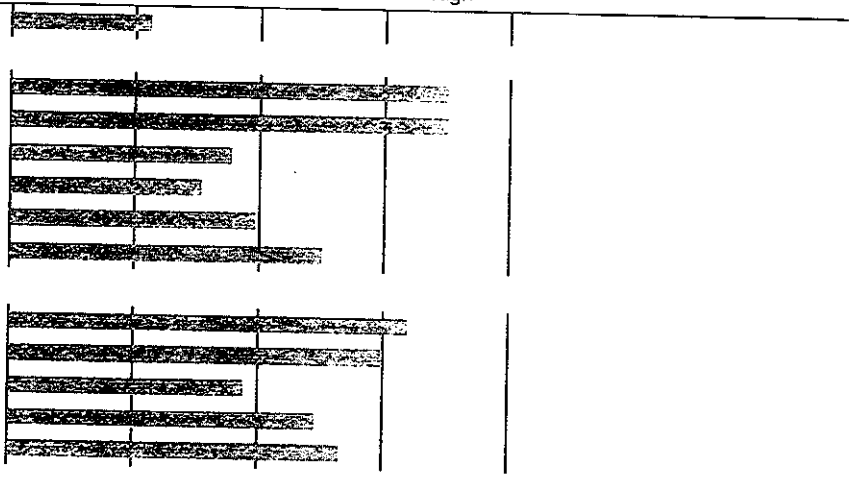
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4466

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H15

Extraction Method: Mehlich 3

	Analysis
pH	5.6
Buffer pH	6.8
Phosphorus, ppm P	484
P Saturation	98
Potassium, ppm K	81
Calcium, ppm Ca	386
Magnesium, ppm Mg	65
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	3.6
H % Saturation	24
K % Saturation	6
Ca % Saturation	53
Mg % Saturation	15
Na % Saturation	2
Organic Matter, %	1.5
Est. Organic Carbon, %	0.89

Sufficiency Levels



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MARDELA SPRINGS **MD 21837**

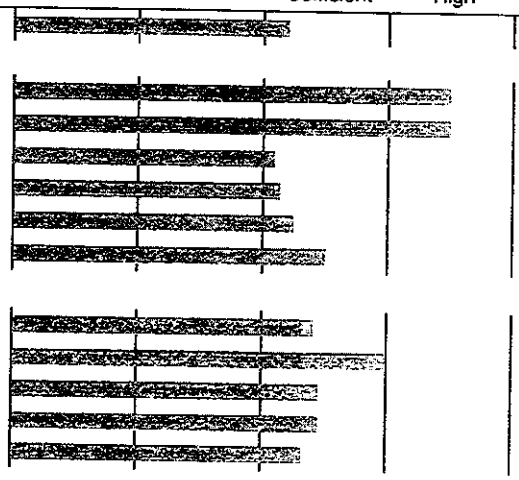
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4467

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H16

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.1
Buffer pH	6.8
Phosphorus, ppm P	557
P Saturation	124
Potassium, ppm K	100
Calcium, ppm Ca	571
Magnesium, ppm Mg	82
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	4.4
H % Saturation	13
K % Saturation	6
Ca % Saturation	64
Mg % Saturation	15
Na % Saturation	1
Organic Matter, %	1.1
Est. Organic Carbon, %	0.66



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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

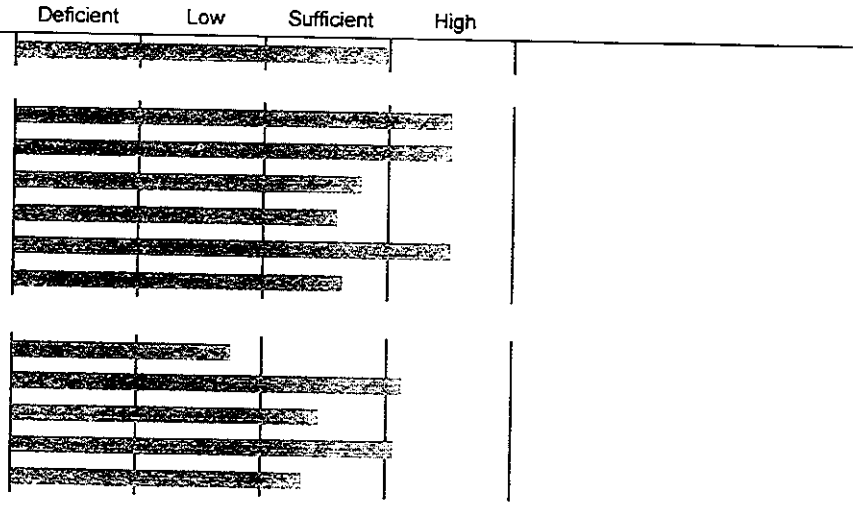
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4468

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H17

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.7
Buffer pH	6.9
Phosphorus, ppm P	665
P Saturation	142
Potassium, ppm K	162
Calcium, ppm Ca	800
Magnesium, ppm Mg	163
Sodium, ppm Na	18
CEC Sum of Cations, meq/100g	6.2
H % Saturation	6
K % Saturation	7
Ca % Saturation	64
Mg % Saturation	22
Na % Saturation	1
Organic Matter, %	1.4
Est. Organic Carbon, %	0.82



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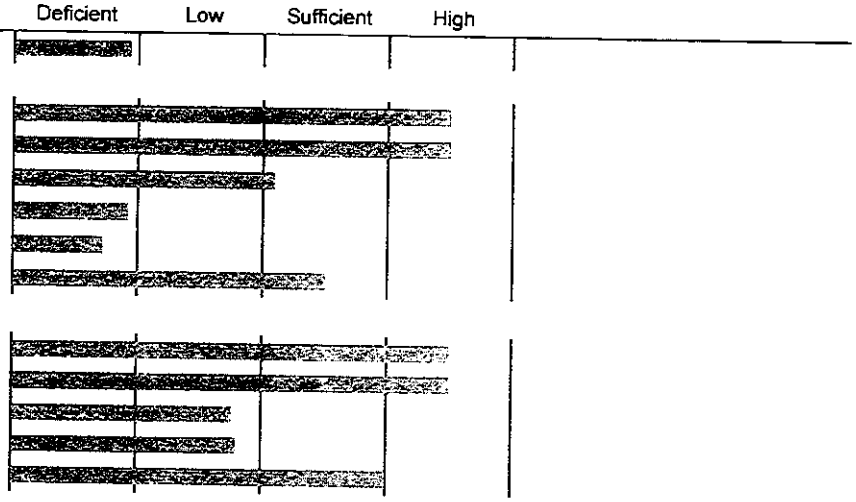
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4470

Results For : CALLOWAY BROTHERS
Location : HOME
Sample ID : H18

Extraction Method: Mehlich 3

	Analysis
pH	5.2
Buffer pH	6.8
Phosphorus, ppm P	446
P Saturation	97
Potassium, ppm K	100
Calcium, ppm Ca	231
Magnesium, ppm Mg	24
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	2.5
H % Saturation	34
K % Saturation	10
Ca % Saturation	45
Mg % Saturation	8
Na % Saturation	3
Organic Matter, %	1.2
Est. Organic Carbon, %	0.70

Sufficiency Levels



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Soil Analysis Report

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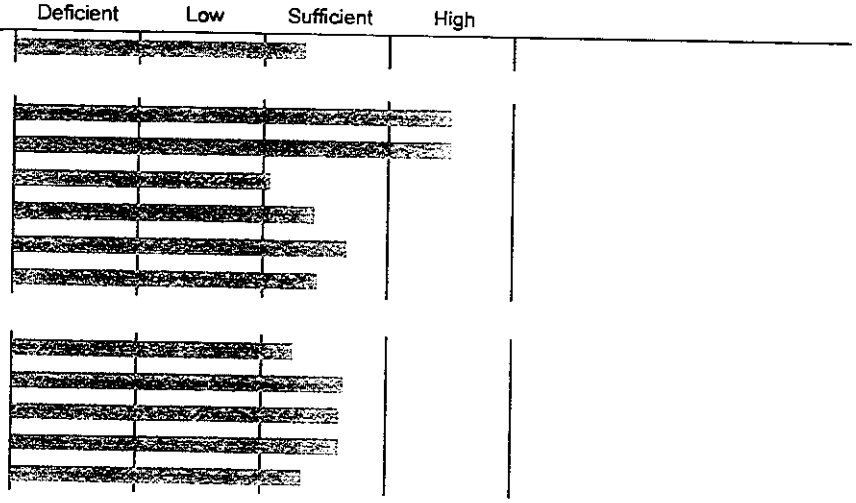
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40477

Results For : CALLOWAY BROTHERS
Location : HOME FARM
Sample ID : H19

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.2	
Buffer pH	6.83	
Phosphorus, ppm P	473	
P Saturation	101	
Potassium, ppm K	96	
Calcium, ppm Ca	706	
Magnesium, ppm Mg	110	
Sodium, ppm Na	14	
CEC Sum of Cations, meq/100g	5.3	
H % Saturation	11	
K % Saturation	5	
Ca % Saturation	66	
Mg % Saturation	17	
Na % Saturation	1	
Organic Matter, %	1.13	
Est. Organic Carbon, %	0.66	



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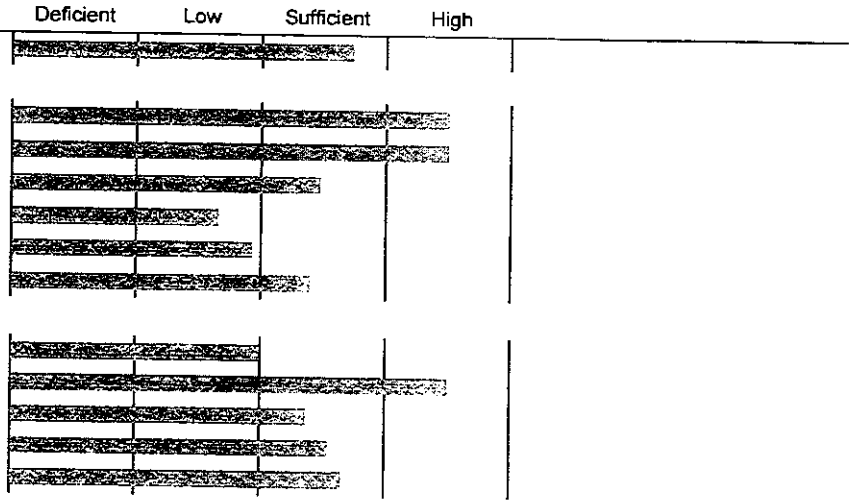
Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40478

Results For : CALLOWAY BROTHERS
Location : HOME BOBBYS and Mary
Sample ID : B1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.5
Buffer pH	6.93
Phosphorus, ppm P	219
P Saturation	76
Potassium, ppm K	134
Calcium, ppm Ca	414
Magnesium, ppm Mg	64
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	3.3
H % Saturation	8
K % Saturation	11
Ca % Saturation	63
Mg % Saturation	16
Na % Saturation	2
Organic Matter, %	0.50
Est. Organic Carbon, %	0.29



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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3333

Results For : CALLOWAY BROTHERS
Location : ~~BOBBY'S~~ Home, Bobby and Mary
Sample ID : B2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	7.0				
Buffer pH	7.00				
Phosphorus, ppm P	377				
P Saturation	107				
Potassium, ppm K	93				
Calcium, ppm Ca	711				
Magnesium, ppm Mg	70				
Sodium, ppm Na	10				
CEC Sum of Cations, meq/100g	4.6				
H % Saturation	4				
K % Saturation	5				
Ca % Saturation	77				
Mg % Saturation	13				
Na % Saturation	1				
Organic Matter, %	1.25				
Est. Organic Carbon, %	0.73				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3337

Results For : CALLOWAY BROTHERS
Location : HOME DOUG
Sample ID : HD2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.3	
Buffer pH	6.67	
Phosphorus, ppm P	221	
P Saturation	35	
Potassium, ppm K	74	
Calcium, ppm Ca	435	
Magnesium, ppm Mg	49	
Sodium, ppm Na	10	
CEC Sum of Cations, meq/100g	4.1	
H % Saturation	31	
K % Saturation	5	
Ca % Saturation	53	
Mg % Saturation	10	
Na % Saturation	1	
Organic Matter, %	3.54	
Est. Organic Carbon, %	2.05	

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3338

Results For : CALLOWAY BROTHERS
Location : HOME DOUG
Sample ID : HD5

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.9				
Buffer pH	6.82				
Phosphorus, ppm P	233				
P Saturation	94				
Potassium, ppm K	37				
Calcium, ppm Ca	548				
Magnesium, ppm Mg	49				
Sodium, ppm Na	6				
CEC Sum of Cations, meq/100g	3.9				
H % Saturation	16				
K % Saturation	2				
Ca % Saturation	70				
Mg % Saturation	11				
Na % Saturation	1				
Organic Matter, %	1.91				
Est. Organic Carbon, %	1.11				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3339

Results For : CALLOWAY BROTHERS
Location : HOME DOUG
Sample ID : HD6

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.1	
Buffer pH	6.73	
Phosphorus, ppm P	114	
P Saturation	26	
Potassium, ppm K	89	
Calcium, ppm Ca	237	
Magnesium, ppm Mg	43	
Sodium, ppm Na	8	
CEC Sum of Cations, meq/100g	3.0	
H % Saturation	40	
K % Saturation	8	
Ca % Saturation	39	
Mg % Saturation	12	
Na % Saturation	1	
Organic Matter, %	1.94	
Est. Organic Carbon, %	1.13	

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Soil Analysis Report

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40480

Results For : CALLOWAY BROTHERS
Location : HOME HUNT CLUB
Sample ID : HC1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.4				
Buffer pH	6.89				
Phosphorus, ppm P	316				
P Saturation	86				
Potassium, ppm K	89				
Calcium, ppm Ca	539				
Magnesium, ppm Mg	135				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	4.5				
H % Saturation	9				
K % Saturation	5				
Ca % Saturation	60				
Mg % Saturation	25				
Na % Saturation	1				
Organic Matter, %	0.91				
Est. Organic Carbon, %	0.53				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3345

Results For : CALLOWAY BROTHERS
Location : ~~HUNT CLUB~~ Home Hunt Club
Sample ID : HC2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.90				
Phosphorus, ppm P	389				
P Saturation	96				
Potassium, ppm K	42				
Calcium, ppm Ca	436				
Magnesium, ppm Mg	66				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	3.2				
H % Saturation	10				
K % Saturation	3				
Ca % Saturation	68				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	1.26				
Est. Organic Carbon, %	0.73				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40479

Results For : CALLOWAY BROTHERS
Location : HOME LLOYD
Sample ID : HL1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.83				
Phosphorus, ppm P	518				
P Saturation	103				
Potassium, ppm K	80				
Calcium, ppm Ca	718				
Magnesium, ppm Mg	108				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	5.3				
H % Saturation	11				
K % Saturation	4				
Ca % Saturation	67				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	0.90				
Est. Organic Carbon, %	0.52				

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Soil Analysis Report

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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

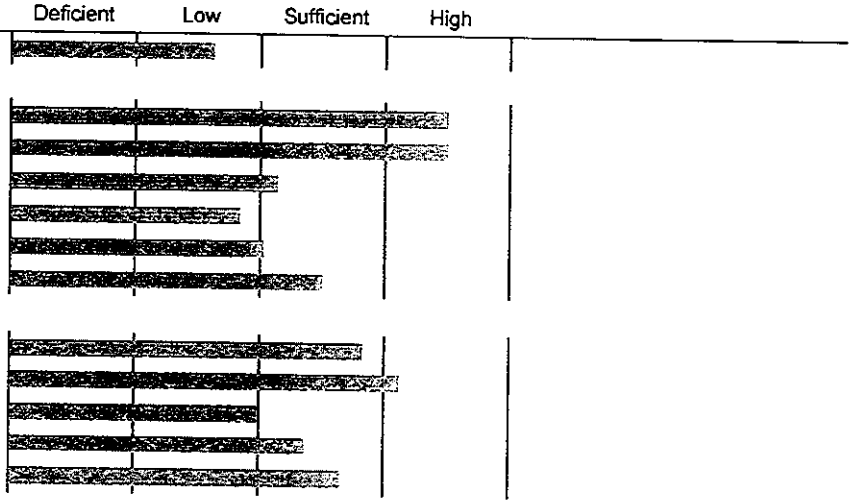
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4487

Results For : CALLOWAY BROTHERS
Location : NAN
Sample ID : N1

Extraction Method: Mehlich 3

	Analysis
pH	5.8
Buffer pH	6.8
Phosphorus, ppm P	369
P Saturation	85
Potassium, ppm K	104
Calcium, ppm Ca	461
Magnesium, ppm Mg	68
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	3.9
H % Saturation	18
K % Saturation	7
Ca % Saturation	59
Mg % Saturation	14
Na % Saturation	2
Organic Matter, %	1.7
Est. Organic Carbon, %	1.01

Sufficiency Levels



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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4488

Results For : CALLOWAY BROTHERS
Location : NAN
Sample ID : N2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.6	
Buffer pH	6.9	
Phosphorus, ppm P	384	
P Saturation	104	
Potassium, ppm K	67	
Calcium, ppm Ca	514	
Magnesium, ppm Mg	63	
Sodium, ppm Na	13	
CEC Sum of Cations, meq/100g	3.6	
H % Saturation	7	
K % Saturation	5	
Ca % Saturation	71	
Mg % Saturation	15	
Na % Saturation	2	
Organic Matter, %	1.1	
Est. Organic Carbon, %	0.63	

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CALLOWAY
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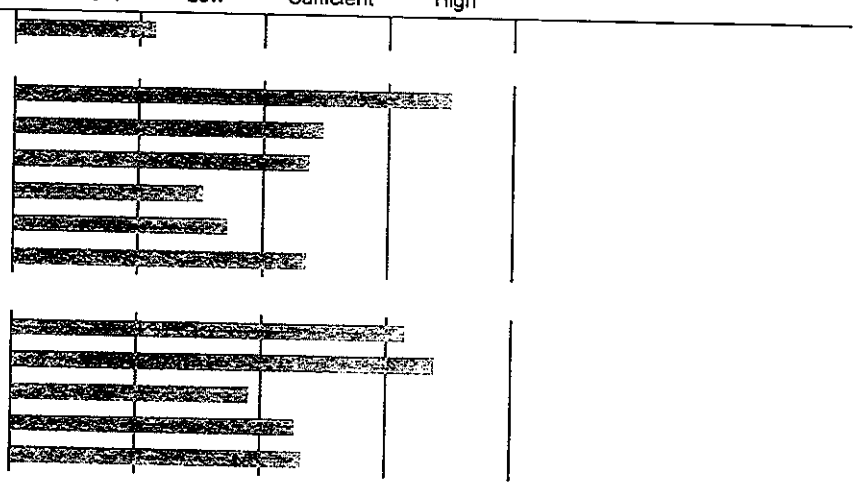
8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4489

Results For : CALLOWAY BROTHERS
Location : NAN
Sample ID : N3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.6	
Buffer pH	6.8	
Phosphorus, ppm P	161	
P Saturation	37	
Potassium, ppm K	124	
Calcium, ppm Ca	383	
Magnesium, ppm Mg	57	
Sodium, ppm Na	12	
CEC Sum of Cations, meq/100g	3.6	
H % Saturation	23	
K % Saturation	9	
Ca % Saturation	54	
Mg % Saturation	13	
Na % Saturation	1	
Organic Matter, %	2.0	
Est. Organic Carbon, %	1.17	



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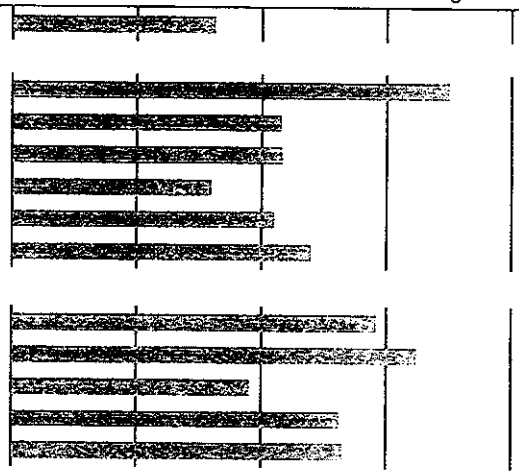
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4490

Results For : CALLOWAY BROTHERS
Location : NAN
Sample ID : N4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.8	
Buffer pH	6.8	
Phosphorus, ppm P	127	
P Saturation	29	
Potassium, ppm K	107	
Calcium, ppm Ca	401	
Magnesium, ppm Mg	73	
Sodium, ppm Na	13	
CEC Sum of Cations, meq/100g	3.6	
H % Saturation	19	
K % Saturation	8	
Ca % Saturation	54	
Mg % Saturation	17	
Na % Saturation	2	
Organic Matter, %	2.8	
Est. Organic Carbon, %	1.62	



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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3340

Results For : CALLOWAY BROTHERS
Location : HOME TANK
Sample ID : HT1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	7.3				
Buffer pH	7.00				
Phosphorus, ppm P	613				
P Saturation	122				
Potassium, ppm K	87				
Calcium, ppm Ca	1505				
Magnesium, ppm Mg	203				
Sodium, ppm Na	17				
CEC Sum of Cations, meq/100g	9.8				
H % Saturation	3				
K % Saturation	2				
Ca % Saturation	77				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	2.13				
Est. Organic Carbon, %	1.24				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3341

Results For : CALLOWAY BROTHERS
Location : HOME TANK
Sample ID : HT2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.8				
Buffer pH	6.89				
Phosphorus, ppm P	563				
P Saturation	113				
Potassium, ppm K	117				
Calcium, ppm Ca	987				
Magnesium, ppm Mg	128				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	6.7				
H % Saturation	5				
K % Saturation	4				
Ca % Saturation	74				
Mg % Saturation	16				
Na % Saturation	1				
Organic Matter, %	1.94				
Est. Organic Carbon, %	1.12				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40481

Results For : CALLOWAY BROTHERS
Location : HOME TANK FARM
Sample ID : HT3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.78				
Phosphorus, ppm P	353				
P Saturation	75				
Potassium, ppm K	77				
Calcium, ppm Ca	620				
Magnesium, ppm Mg	126				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	5.2				
H % Saturation	15				
K % Saturation	4				
Ca % Saturation	60				
Mg % Saturation	20				
Na % Saturation	1				
Organic Matter, %	1.30				
Est. Organic Carbon, %	0.75				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40482

Results For : CALLOWAY BROTHERS
Location : HOME TANK FARM
Sample ID : HT4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.7	
Buffer pH	6.84	
Phosphorus, ppm P	582	
P Saturation	122	
Potassium, ppm K	122	
Calcium, ppm Ca	1132	
Magnesium, ppm Mg	174	
Sodium, ppm Na	17	
CEC Sum of Cations, meq/100g	8.0	
H % Saturation	6	
K % Saturation	4	
Ca % Saturation	71	
Mg % Saturation	18	
Na % Saturation	1	
Organic Matter, %	1.85	
Est. Organic Carbon, %	1.07	

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3346

Results For : CALLOWAY BROTHERS
Location : [redacted] Johnson-Upper Ferry
Sample ID : J1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.86				
Phosphorus, ppm P	72				
P Saturation	26				
Potassium, ppm K	86				
Calcium, ppm Ca	313				
Magnesium, ppm Mg	65				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	2.9				
H % Saturation	18				
K % Saturation	8				
Ca % Saturation	54				
Mg % Saturation	19				
Na % Saturation	1				
Organic Matter, %	1.87				
Est. Organic Carbon, %	1.08				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3347

Results For : CALLOWAY BROTHERS
Location : [redacted] Johnson-upper ferry
Sample ID : J2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.92				
Phosphorus, ppm P	93				
P Saturation	35				
Potassium, ppm K	65				
Calcium, ppm Ca	350				
Magnesium, ppm Mg	72				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	2.9				
H % Saturation	10				
K % Saturation	6				
Ca % Saturation	61				
Mg % Saturation	21				
Na % Saturation	1				
Organic Matter, %	1.36				
Est. Organic Carbon, %	0.79				

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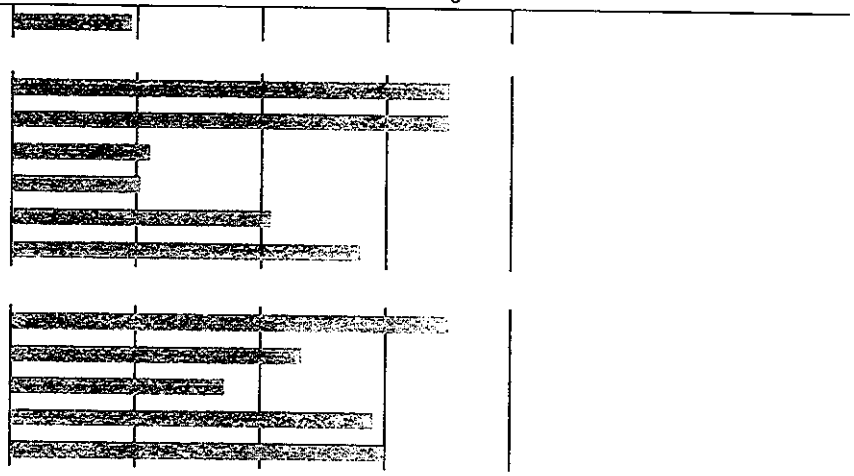
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4440

Results For : CALLOWAY BROTHERS
Location : DAVID KENNEY
Sample ID : DK1

Extraction Method: Mehlich 3

	Analysis
pH	5.3
Buffer pH	6.8
Phosphorus, ppm P	305
P Saturation	77
Potassium, ppm K	51
Calcium, ppm Ca	259
Magnesium, ppm Mg	71
Sodium, ppm Na	21
CEC Sum of Cations, meq/100g	3.0
H % Saturation	30
K % Saturation	4
Ca % Saturation	43
Mg % Saturation	20
Na % Saturation	3
Organic Matter, %	1.2
Est. Organic Carbon, %	0.72

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4526

Results For : CALLOWAY BROTHERS
Location : PAT MOORE
Sample ID : PM3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.7				
Phosphorus, ppm P	366				
P Saturation	87				
Potassium, ppm K	103				
Calcium, ppm Ca	473				
Magnesium, ppm Mg	44				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	4.2				
H % Saturation	28				
K % Saturation	6				
Ca % Saturation	55				
Mg % Saturation	9				
Na % Saturation	2				
Organic Matter, %	1.7				
Est. Organic Carbon, %	1.00				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4527

Results For : CALLOWAY BROTHERS
Location : PAT MOORE
Sample ID : PM4

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.2				
Buffer pH	6.7				
Phosphorus, ppm P	438				
P Saturation	98				
Potassium, ppm K	90				
Calcium, ppm Ca	315				
Magnesium, ppm Mg	14				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	3.0				
H % Saturation	34				
K % Saturation	8				
Ca % Saturation	52				
Mg % Saturation	4				
Na % Saturation	2				
Organic Matter, %	1.5				
Est. Organic Carbon, %	0.85				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4528

Results For : CALLOWAY BROTHERS
Location : WILLIAM MORGAN
Sample ID : WM1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.9				
Phosphorus, ppm P	86				
P Saturation	21				
Potassium, ppm K	29				
Calcium, ppm Ca	318				
Magnesium, ppm Mg	18				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	2.4				
H % Saturation	22				
K % Saturation	3				
Ca % Saturation	66				
Mg % Saturation	6				
Na % Saturation	2				
Organic Matter, %	1.5				
Est. Organic Carbon, %	0.86				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4529

Results For : CALLOWAY BROTHERS
Location : WILLIAM MORGAN
Sample ID : WM2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.8	
Buffer pH	6.8	
Phosphorus, ppm P	194	
P Saturation	40	
Potassium, ppm K	32	
Calcium, ppm Ca	532	
Magnesium, ppm Mg	24	
Sodium, ppm Na	15	
CEC Sum of Cations, meq/100g	3.7	
H % Saturation	20	
K % Saturation	2	
Ca % Saturation	71	
Mg % Saturation	5	
Na % Saturation	2	
Organic Matter, %	1.9	
Est. Organic Carbon, %	1.08	

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40492

Results For : CALLOWAY BROTHERS
Location : FRANK NASHAY
Sample ID : FN1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.57				
Phosphorus, ppm P	14				
P Saturation	8				
Potassium, ppm K	64				
Calcium, ppm Ca	543				
Magnesium, ppm Mg	109				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	5.5				
H % Saturation	30				
K % Saturation	3				
Ca % Saturation	49				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	1.33				
Est. Organic Carbon, %	0.77				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4536

Results For : CALLOWAY BROTHERS
Location : FRANK NASHAY
Sample ID : FN2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.0	
Buffer pH	6.6	
Phosphorus, ppm P	124	
P Saturation	18	
Potassium, ppm K	124	
Calcium, ppm Ca	168	
Magnesium, ppm Mg	21	
Sodium, ppm Na	13	
CEC Sum of Cations, meq/100g	2.4	
H % Saturation	43	
K % Saturation	13	
Ca % Saturation	35	
Mg % Saturation	7	
Na % Saturation	2	
Organic Matter, %	3.7	
Est. Organic Carbon, %	2.16	

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40493

Results For : CALLOWAY BROTHERS
Location : FRANK NASHAY
Sample ID : FN3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.54				
Phosphorus, ppm P	10				
P Saturation	7				
Potassium, ppm K	73				
Calcium, ppm Ca	543				
Magnesium, ppm Mg	136				
Sodium, ppm Na	18				
CEC Sum of Cations, meq/100g	6.0				
H % Saturation	31				
K % Saturation	3				
Ca % Saturation	46				
Mg % Saturation	19				
Na % Saturation	1				
Organic Matter, %	1.25				
Est. Organic Carbon, %	0.73				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40484

Results For : CALLOWAY BROTHERS
Location : FRANCIS Owens
Sample ID : FO1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.88				
Phosphorus, ppm P	162				
P Saturation	54				
Potassium, ppm K	79				
Calcium, ppm Ca	349				
Magnesium, ppm Mg	74				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	3.1				
H % Saturation	15				
K % Saturation	7				
Ca % Saturation	56				
Mg % Saturation	20				
Na % Saturation	2				
Organic Matter, %	0.61				
Est. Organic Carbon, %	0.36				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3356

Results For : CALLOWAY BROTHERS
Location : FRANCES OWENS
Sample ID : FO2 3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	4.9				
Buffer pH	6.60				
Phosphorus, ppm P	275				
P Saturation	52				
Potassium, ppm K	52				
Calcium, ppm Ca	85				
Magnesium, ppm Mg	8				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	1.2				
H % Saturation	45				
K % Saturation	11				
Ca % Saturation	35				
Mg % Saturation	5				
Na % Saturation	3				
Organic Matter, %	2.08				
Est. Organic Carbon, %	1.21				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3357

Results For : CALLOWAY BROTHERS
Location : FRANCES OWENS
Sample ID : FO4 5

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	4.7				
Buffer pH	6.60				
Phosphorus, ppm P	170				
P Saturation	38				
Potassium, ppm K	44				
Calcium, ppm Ca	52				
Magnesium, ppm Mg	10				
Sodium, ppm Na	11				
CEC Sum of Cations, meq/100g	1.0				
H % Saturation	52				
K % Saturation	11				
Ca % Saturation	25				
Mg % Saturation	8				
Na % Saturation	4				
Organic Matter, %	1.84				
Est. Organic Carbon, %	1.07				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3351

Results For : CALLOWAY BROTHERS
Location : [redacted] Owens, Sally
Sample ID : AOM1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.90				
Phosphorus, ppm P	276				
P Saturation	67				
Potassium, ppm K	59				
Calcium, ppm Ca	376				
Magnesium, ppm Mg	66				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	3.0				
H % Saturation	12				
K % Saturation	5				
Ca % Saturation	63				
Mg % Saturation	19				
Na % Saturation	1				
Organic Matter, %	1.62				
Est. Organic Carbon, %	0.94				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3352

Results For : CALLOWAY BROTHERS
Location : [redacted] Owens, Sally
Sample ID : AOM2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.88				
Phosphorus, ppm P	195				
P Saturation	37				
Potassium, ppm K	63				
Calcium, ppm Ca	195				
Magnesium, ppm Mg	12				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	1.8				
H % Saturation	28				
K % Saturation	9				
Ca % Saturation	55				
Mg % Saturation	5				
Na % Saturation	2				
Organic Matter, %	1.93				
Est. Organic Carbon, %	1.12				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3381

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : DBP1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.7				
Buffer pH	6.95				
Phosphorus, ppm P	90				
P Saturation	32				
Potassium, ppm K	68				
Calcium, ppm Ca	364				
Magnesium, ppm Mg	75				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	2.8				
H % Saturation	6				
K % Saturation	6				
Ca % Saturation	64				
Mg % Saturation	22				
Na % Saturation	1				
Organic Matter, %	1.43				
Est. Organic Carbon, %	0.83				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3382

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Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : DBP2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.4				
Buffer pH	6.90				
Phosphorus, ppm P	249				
P Saturation	67				
Potassium, ppm K	95				
Calcium, ppm Ca	535				
Magnesium, ppm Mg	82				
Sodium, ppm Na	7				
CEC Sum of Cations, meq/100g	4.0				
H % Saturation	9				
K % Saturation	6				
Ca % Saturation	67				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	1.85				
Est. Organic Carbon, %	1.07				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3383

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : DBP3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.93				
Phosphorus, ppm P	130				
P Saturation	28				
Potassium, ppm K	84				
Calcium, ppm Ca	388				
Magnesium, ppm Mg	95				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	3.2				
H % Saturation	7				
K % Saturation	7				
Ca % Saturation	60				
Mg % Saturation	25				
Na % Saturation	1				
Organic Matter, %	1.71				
Est. Organic Carbon, %	0.99				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4543

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.9				
Phosphorus, ppm P	126				
P Saturation	38				
Potassium, ppm K	45				
Calcium, ppm Ca	507				
Magnesium, ppm Mg	172				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	4.4				
H % Saturation	7				
K % Saturation	3				
Ca % Saturation	57				
Mg % Saturation	32				
Na % Saturation	1				
Organic Matter, %	1.5				
Est. Organic Carbon, %	0.87				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4544

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.9				
Phosphorus, ppm P	113				
P Saturation	35				
Potassium, ppm K	35				
Calcium, ppm Ca	514				
Magnesium, ppm Mg	169				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	4.4				
H % Saturation	7				
K % Saturation	2				
Ca % Saturation	58				
Mg % Saturation	32				
Na % Saturation	1				
Organic Matter, %	1.6				
Est. Organic Carbon, %	0.92				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4545

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.6	
Buffer pH	6.9	
Phosphorus, ppm P	118	
P Saturation	36	
Potassium, ppm K	32	
Calcium, ppm Ca	489	
Magnesium, ppm Mg	163	
Sodium, ppm Na	13	
CEC Sum of Cations, meq/100g	4.2	
H % Saturation	7	
K % Saturation	2	
Ca % Saturation	58	
Mg % Saturation	32	
Na % Saturation	1	
Organic Matter, %	1.4	
Est. Organic Carbon, %	0.79	

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Lab Number : 4546

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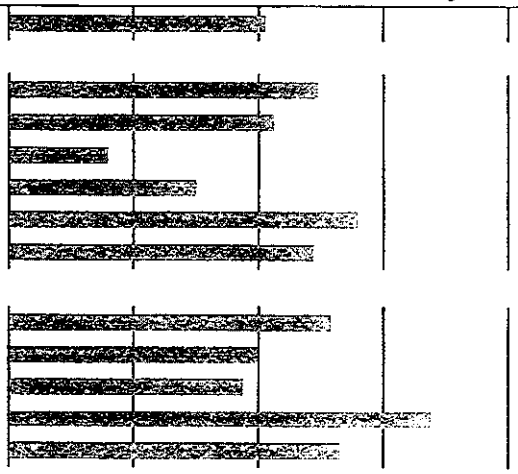
Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC5

Extraction Method: Mehlich 3

	Analysis
pH	6.0
Buffer pH	6.9
Phosphorus, ppm P	74
P Saturation	28
Potassium, ppm K	37
Calcium, ppm Ca	376
Magnesium, ppm Mg	118
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.6
H % Saturation	15
K % Saturation	3
Ca % Saturation	52
Mg % Saturation	28
Na % Saturation	2
Organic Matter, %	1.3
Est. Organic Carbon, %	0.73

Sufficiency Levels



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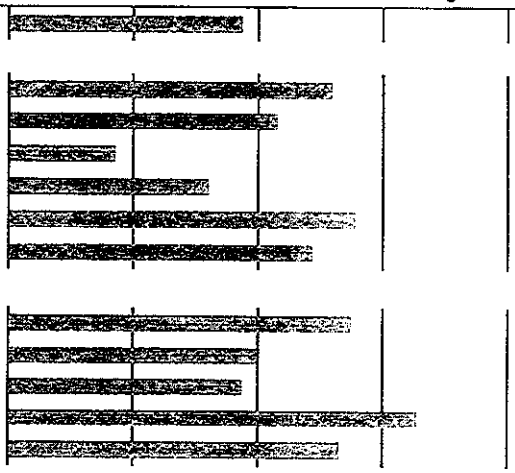
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4579

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC6

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.9
Buffer pH	6.8
Phosphorus, ppm P	80
P Saturation	29
Potassium, ppm K	40
Calcium, ppm Ca	406
Magnesium, ppm Mg	117
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.8
H % Saturation	17
K % Saturation	3
Ca % Saturation	52
Mg % Saturation	26
Na % Saturation	2
Organic Matter, %	1.6
Est. Organic Carbon, %	0.95



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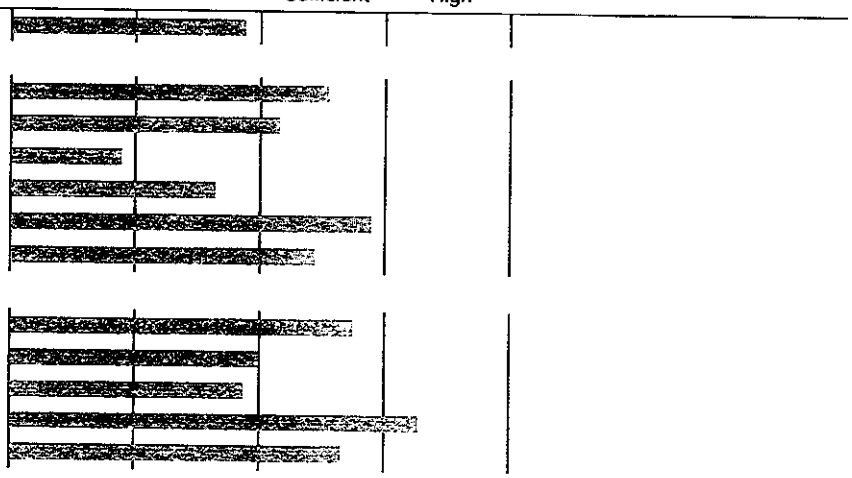
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4580

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC7+9

Extraction Method: Mehlich 3

	Analysis
pH	5.9
Buffer pH	6.8
Phosphorus, ppm P	78
P Saturation	29
Potassium, ppm K	41
Calcium, ppm Ca	411
Magnesium, ppm Mg	124
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	3.9
H % Saturation	17
K % Saturation	3
Ca % Saturation	52
Mg % Saturation	26
Na % Saturation	2
Organic Matter, %	1.5
Est. Organic Carbon, %	0.84

Sufficiency Levels



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Date Analyzed: 01/27/2023
Lab Number : 4581

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Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC8

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.5	
Buffer pH	6.9	
Phosphorus, ppm P	114	
P Saturation	37	
Potassium, ppm K	35	
Calcium, ppm Ca	539	
Magnesium, ppm Mg	171	
Sodium, ppm Na	14	
CEC Sum of Cations, meq/100g	4.6	
H % Saturation	8	
K % Saturation	2	
Ca % Saturation	58	
Mg % Saturation	31	
Na % Saturation	1	
Organic Matter, %	1.5	
Est. Organic Carbon, %	0.89	

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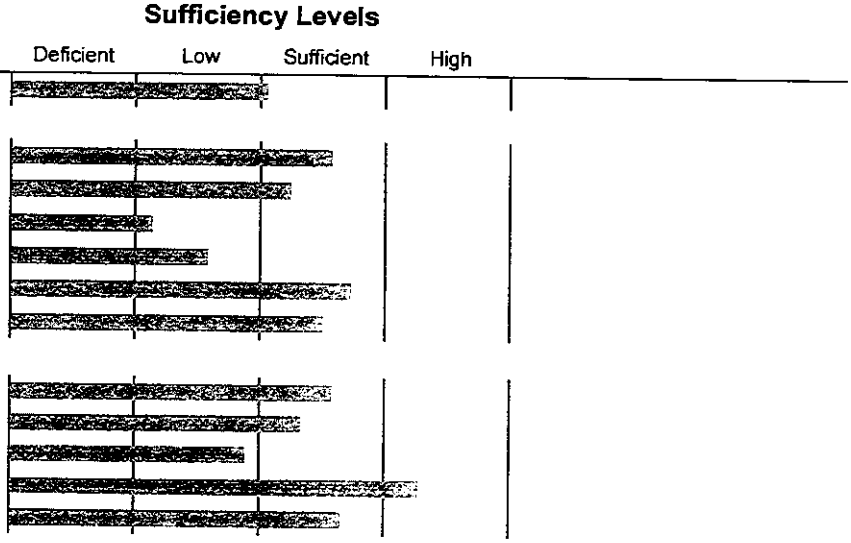
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4582

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC10

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.0	
Buffer pH	6.8	
Phosphorus, ppm P	79	
P Saturation	31	
Potassium, ppm K	52	
Calcium, ppm Ca	396	
Magnesium, ppm Mg	114	
Sodium, ppm Na	15	
CEC Sum of Cations, meq/100g	3.7	
H % Saturation	15	
K % Saturation	4	
Ca % Saturation	53	
Mg % Saturation	26	
Na % Saturation	2	
Organic Matter, %	1.7	
Est. Organic Carbon, %	0.98	



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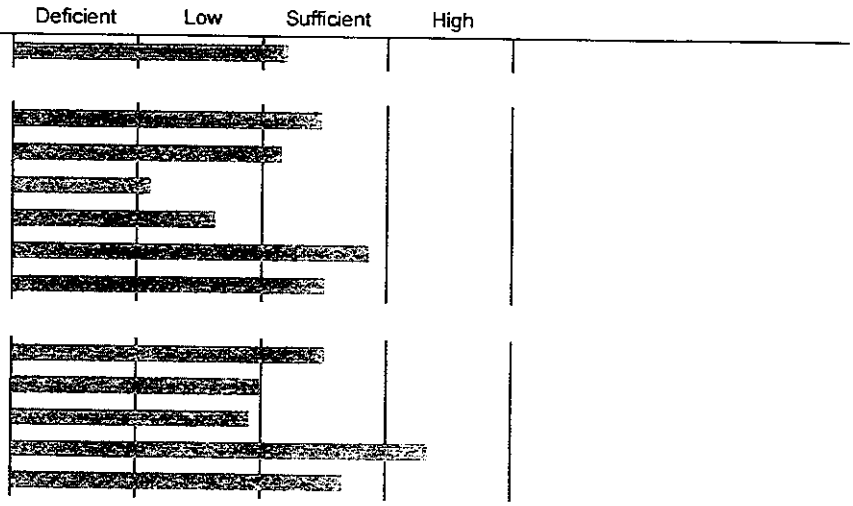
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4583

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC11

Extraction Method: Mehlich 3

	Analysis
pH	6.1
Buffer pH	6.9
Phosphorus, ppm P	74
P Saturation	29
Potassium, ppm K	51
Calcium, ppm Ca	407
Magnesium, ppm Mg	122
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	3.8
H % Saturation	14
K % Saturation	3
Ca % Saturation	54
Mg % Saturation	27
Na % Saturation	2
Organic Matter, %	1.5
Est. Organic Carbon, %	0.89

Sufficiency Levels



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4584

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PC12

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.8				
Phosphorus, ppm P	79				
P Saturation	30				
Potassium, ppm K	49				
Calcium, ppm Ca	437				
Magnesium, ppm Mg	127				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	4.0				
H % Saturation	14				
K % Saturation	3				
Ca % Saturation	54				
Mg % Saturation	27				
Na % Saturation	2				
Organic Matter, %	2.1				
Est. Organic Carbon, %	1.19				

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Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PCU1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.9				
Phosphorus, ppm P	27				
P Saturation	12				
Potassium, ppm K	66				
Calcium, ppm Ca	343				
Magnesium, ppm Mg	77				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	2.9				
H % Saturation	11				
K % Saturation	6				
Ca % Saturation	59				
Mg % Saturation	22				
Na % Saturation	2				
Organic Matter, %	1.4				
Est. Organic Carbon, %	0.79				

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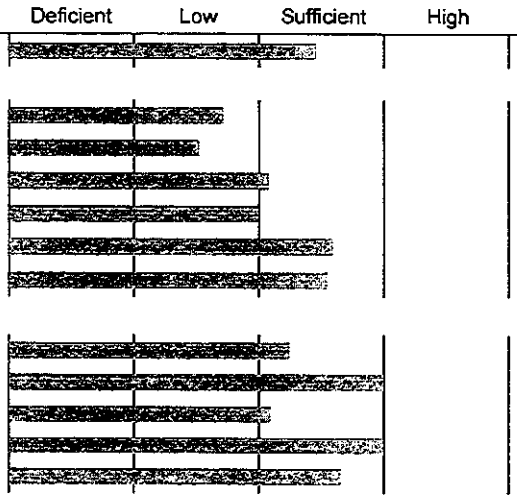
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4586

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PCU2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.3
Buffer pH	6.9
Phosphorus, ppm P	43
P Saturation	13
Potassium, ppm K	98
Calcium, ppm Ca	500
Magnesium, ppm Mg	105
Sodium, ppm Na	16
CEC Sum of Cations, meq/100g	4.1
H % Saturation	11
K % Saturation	6
Ca % Saturation	60
Mg % Saturation	21
Na % Saturation	2
Organic Matter, %	2.1
Est. Organic Carbon, %	1.20



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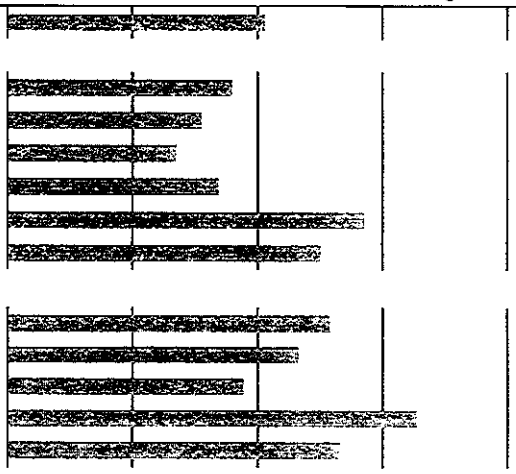
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4587

Results For : CALLOWAY BROTHERS
Location : BILL PALECHEK
Sample ID : PCU3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.0
Buffer pH	6.8
Phosphorus, ppm P	45
P Saturation	14
Potassium, ppm K	62
Calcium, ppm Ca	424
Magnesium, ppm Mg	122
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	4.0
H % Saturation	15
K % Saturation	4
Ca % Saturation	53
Mg % Saturation	26
Na % Saturation	2
Organic Matter, %	1.6
Est. Organic Carbon, %	0.95



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4591

Results For : CALLOWAY BROTHERS
Location : BILLY PHILLIPS HOME
Sample ID : BPH2A, BPH2B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.9				
Phosphorus, ppm P	275				
P Saturation	67				
Potassium, ppm K	32				
Calcium, ppm Ca	419				
Magnesium, ppm Mg	67				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	3.2				
H % Saturation	12				
K % Saturation	3				
Ca % Saturation	65				
Mg % Saturation	18				
Na % Saturation	2				
Organic Matter, %	1.2				
Est. Organic Carbon, %	0.70				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4589

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : BILLY PHILLIPS TOWER
Sample ID : BPT1A, BPT1B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.9				
Phosphorus, ppm P	89				
P Saturation	19				
Potassium, ppm K	99				
Calcium, ppm Ca	378				
Magnesium, ppm Mg	71				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	3.3				
H % Saturation	15				
K % Saturation	8				
Ca % Saturation	57				
Mg % Saturation	18				
Na % Saturation	2				
Organic Matter, %	2.3				
Est. Organic Carbon, %	1.32				

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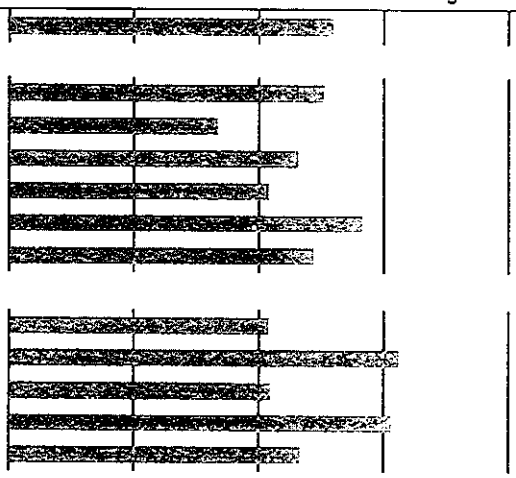
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4590

Results For : CALLOWAY BROTHERS
Location : BILLY PHILLIPS TOWER
Sample ID : BPT2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.4
Buffer pH	6.9
Phosphorus, ppm P	76
P Saturation	17
Potassium, ppm K	120
Calcium, ppm Ca	538
Magnesium, ppm Mg	120
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	4.5
H % Saturation	9
K % Saturation	7
Ca % Saturation	60
Mg % Saturation	22
Na % Saturation	1
Organic Matter, %	2.1
Est. Organic Carbon, %	1.22



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Soil Analysis Report

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40490

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS NUTTERS
Sample ID : GPM1A, GPM1B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.76				
Phosphorus, ppm P	159				
P Saturation	39				
Potassium, ppm K	61				
Calcium, ppm Ca	336				
Magnesium, ppm Mg	69				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	3.4				
H % Saturation	27				
K % Saturation	5				
Ca % Saturation	49				
Mg % Saturation	17				
Na % Saturation	2				
Organic Matter, %	1.20				
Est. Organic Carbon, %	0.70				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3359

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS NUTTERS
Sample ID : GPM2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.91				
Phosphorus, ppm P	162				
P Saturation	50				
Potassium, ppm K	85				
Calcium, ppm Ca	283				
Magnesium, ppm Mg	62				
Sodium, ppm Na	7				
CEC Sum of Cations, meq/100g	2.5				
H % Saturation	14				
K % Saturation	9				
Ca % Saturation	56				
Mg % Saturation	20				
Na % Saturation	1				
Organic Matter, %	1.79				
Est. Organic Carbon, %	1.04				

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Soil Analysis Report

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40491

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MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS NUTTERS
Sample ID : GPM3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.81				
Phosphorus, ppm P	62				
P Saturation	20				
Potassium, ppm K	55				
Calcium, ppm Ca	211				
Magnesium, ppm Mg	52				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	2.5				
H % Saturation	32				
K % Saturation	6				
Ca % Saturation	42				
Mg % Saturation	17				
Na % Saturation	2				
Organic Matter, %	0.76				
Est. Organic Carbon, %	0.44				

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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3361

CALLOWAY
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MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS PAIGE
Sample ID : GP1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.72				
Phosphorus, ppm P	130				
P Saturation	32				
Potassium, ppm K	122				
Calcium, ppm Ca	581				
Magnesium, ppm Mg	74				
Sodium, ppm Na	16				
CEC Sum of Cations, meq/100g	5.0				
H % Saturation	21				
K % Saturation	6				
Ca % Saturation	59				
Mg % Saturation	12				
Na % Saturation	1				
Organic Matter, %	2.27				
Est. Organic Carbon, %	1.32				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3362

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS PAIGE
Sample ID : GP2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.67				
Phosphorus, ppm P	180				
P Saturation	49				
Potassium, ppm K	197				
Calcium, ppm Ca	760				
Magnesium, ppm Mg	102				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	6.5				
H % Saturation	19				
K % Saturation	8				
Ca % Saturation	59				
Mg % Saturation	13				
Na % Saturation	1				
Organic Matter, %	2.69				
Est. Organic Carbon, %	1.56				

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MARDELA SPRINGS MD 21837

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3364

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS PAIGE
Sample ID : GP3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.70				
Phosphorus, ppm P	151				
P Saturation	36				
Potassium, ppm K	142				
Calcium, ppm Ca	409				
Magnesium, ppm Mg	47				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	4.1				
H % Saturation	30				
K % Saturation	9				
Ca % Saturation	50				
Mg % Saturation	10				
Na % Saturation	1				
Organic Matter, %	1.93				
Est. Organic Carbon, %	1.12				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3365

Results For : CALLOWAY BROTHERS
Location : G PHILLIPS PAIGE
Sample ID : GP4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.67				
Phosphorus, ppm P	211				
P Saturation	58				
Potassium, ppm K	153				
Calcium, ppm Ca	517				
Magnesium, ppm Mg	61				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	4.9				
H % Saturation	27				
K % Saturation	8				
Ca % Saturation	53				
Mg % Saturation	10				
Na % Saturation	1				
Organic Matter, %	2.69				
Est. Organic Carbon, %	1.56				

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Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40485

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS
Sample ID : MPH1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.84				
Phosphorus, ppm P	316				
P Saturation	67				
Potassium, ppm K	50				
Calcium, ppm Ca	328				
Magnesium, ppm Mg	112				
Sodium, ppm Na	10				
CEC Sum of Cations, meq/100g	3.4				
H % Saturation	18				
K % Saturation	4				
Ca % Saturation	49				
Mg % Saturation	28				
Na % Saturation	1				
Organic Matter, %	0.82				
Est. Organic Carbon, %	0.47				

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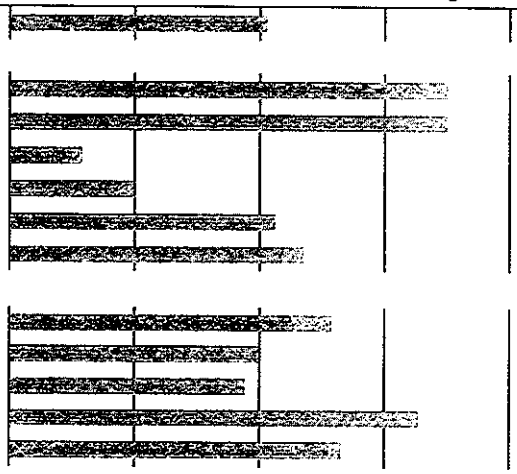
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4598

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS HOME
Sample ID : MPH2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.0	
Buffer pH	6.9	
Phosphorus, ppm P	242	
P Saturation	57	
Potassium, ppm K	27	
Calcium, ppm Ca	250	
Magnesium, ppm Mg	74	
Sodium, ppm Na	12	
CEC Sum of Cations, meq/100g	2.3	
H % Saturation	15	
K % Saturation	3	
Ca % Saturation	53	
Mg % Saturation	26	
Na % Saturation	2	
Organic Matter, %	1.1	
Est. Organic Carbon, %	0.62	



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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4599

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS HOME
Sample ID : MPH5

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.8				
Buffer pH	6.9				
Phosphorus, ppm P	271				
P Saturation	74				
Potassium, ppm K	63				
Calcium, ppm Ca	498				
Magnesium, ppm Mg	172				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	4.4				
H % Saturation	5				
K % Saturation	4				
Ca % Saturation	57				
Mg % Saturation	33				
Na % Saturation	1				
Organic Matter, %	1.3				
Est. Organic Carbon, %	0.77				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4600

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS HOME
Sample ID : MPH6+7

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.6	
Buffer pH	6.9	
Phosphorus, ppm P	139	
P Saturation	54	
Potassium, ppm K	112	
Calcium, ppm Ca	856	
Magnesium, ppm Mg	242	
Sodium, ppm Na	14	
CEC Sum of Cations, meq/100g	7.1	
H % Saturation	7	
K % Saturation	4	
Ca % Saturation	60	
Mg % Saturation	28	
Na % Saturation	1	
Organic Matter, %	2.4	
Est. Organic Carbon, %	1.38	

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Invoice No. : I139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4601

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS HOME
Sample ID : MPH8

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.9				
Phosphorus, ppm P	228				
P Saturation	69				
Potassium, ppm K	39				
Calcium, ppm Ca	318				
Magnesium, ppm Mg	137				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	3.2				
H % Saturation	10				
K % Saturation	3				
Ca % Saturation	49				
Mg % Saturation	36				
Na % Saturation	2				
Organic Matter, %	1.2				
Est. Organic Carbon, %	0.70				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4602

CALLOWAY
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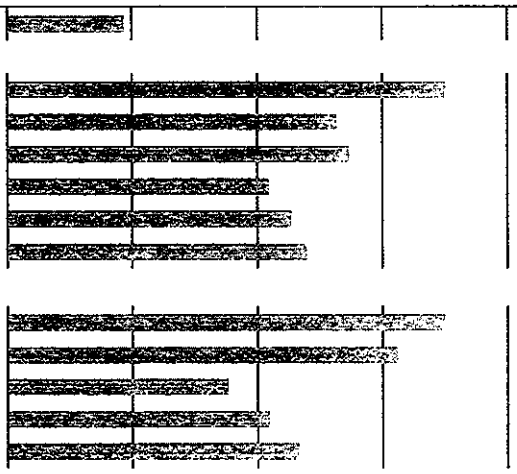
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS RIGHT
Sample ID : MPR1+4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	5.2	
Buffer pH	6.5	
Phosphorus, ppm P	216	
P Saturation	41	
Potassium, ppm K	158	
Calcium, ppm Ca	545	
Magnesium, ppm Mg	84	
Sodium, ppm Na	13	
CEC Sum of Cations, meq/100g	6.1	
H % Saturation	36	
K % Saturation	7	
Ca % Saturation	45	
Mg % Saturation	11	
Na % Saturation	1	
Organic Matter, %	3.0	
Est. Organic Carbon, %	1.72	



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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4603

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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : MIKE PHILLIPS RIGHT
Sample ID : MPR2+3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.6				
Phosphorus, ppm P	74				
P Saturation	21				
Potassium, ppm K	87				
Calcium, ppm Ca	511				
Magnesium, ppm Mg	68				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	5.0				
H % Saturation	32				
K % Saturation	4				
Ca % Saturation	51				
Mg % Saturation	11				
Na % Saturation	1				
Organic Matter, %	2.4				
Est. Organic Carbon, %	1.39				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4553

CALLOWAY
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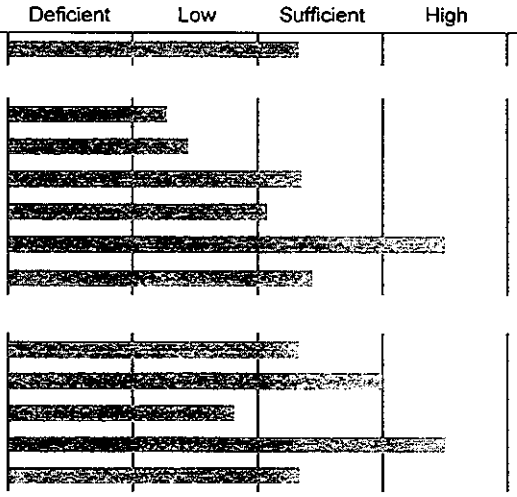
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : M G PHILLIPS TWILLEY
Sample ID : MGP1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.2
Buffer pH	6.8
Phosphorus, ppm P	32
P Saturation	11
Potassium, ppm K	123
Calcium, ppm Ca	538
Magnesium, ppm Mg	223
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	5.6
H % Saturation	12
K % Saturation	6
Ca % Saturation	48
Mg % Saturation	33
Na % Saturation	1
Organic Matter, %	2.2
Est. Organic Carbon, %	1.26



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Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4554

CALLOWAY
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MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : M G PHILLIPS TWILLEY
Sample ID : MGP2+3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.9				
Phosphorus, ppm P	31				
P Saturation	11				
Potassium, ppm K	200				
Calcium, ppm Ca	647				
Magnesium, ppm Mg	296				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	6.8				
H % Saturation	7				
K % Saturation	8				
Ca % Saturation	48				
Mg % Saturation	36				
Na % Saturation	1				
Organic Matter, %	2.5				
Est. Organic Carbon, %	1.47				

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Account No. : 1002

Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3367

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : V PHILLIPS – Home
Sample ID : VP1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.5				
Buffer pH	6.92				
Phosphorus, ppm P	325				
P Saturation	79				
Potassium, ppm K	49				
Calcium, ppm Ca	436				
Magnesium, ppm Mg	80				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	3.3				
H % Saturation	8				
K % Saturation	4				
Ca % Saturation	67				
Mg % Saturation	20				
Na % Saturation	1				
Organic Matter, %	1.57				
Est. Organic Carbon, %	0.91				

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Soil Analysis Report

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40486

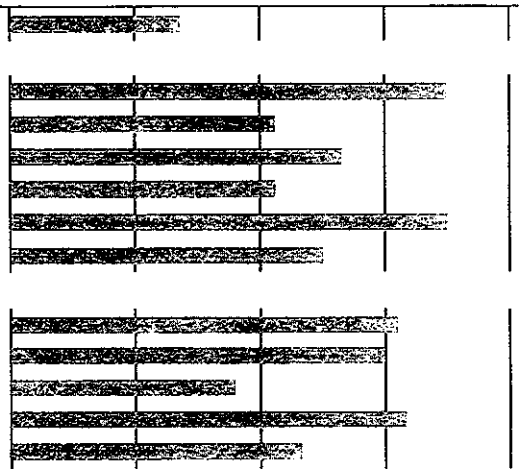
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : ~~VIRGINIA PHILLIPS~~ V Phillips-Home
Sample ID : VP2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.7
Buffer pH	6.67
Phosphorus, ppm P	111
P Saturation	28
Potassium, ppm K	151
Calcium, ppm Ca	565
Magnesium, ppm Mg	172
Sodium, ppm Na	15
CEC Sum of Cations, meq/100g	6.0
H % Saturation	22
K % Saturation	6
Ca % Saturation	47
Mg % Saturation	24
Na % Saturation	1
Organic Matter, %	1.65
Est. Organic Carbon, %	0.96



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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3368

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : V PHILLIPS – Home
Sample ID : VP3 4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.83				
Phosphorus, ppm P	135				
P Saturation	40				
Potassium, ppm K	160				
Calcium, ppm Ca	652				
Magnesium, ppm Mg	145				
Sodium, ppm Na	11				
CEC Sum of Cations, meq/100g	5.5				
H % Saturation	11				
K % Saturation	7				
Ca % Saturation	59				
Mg % Saturation	22				
Na % Saturation	1				
Organic Matter, %	2.28				
Est. Organic Carbon, %	1.32				

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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3369

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : V PHILLIPS – Home
Sample ID : VP5 6

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.1				
Buffer pH	6.81				
Phosphorus, ppm P	118				
P Saturation	32				
Potassium, ppm K	160				
Calcium, ppm Ca	589				
Magnesium, ppm Mg	138				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	5.3				
H % Saturation	14				
K % Saturation	8				
Ca % Saturation	55				
Mg % Saturation	22				
Na % Saturation	1				
Organic Matter, %	2.53				
Est. Organic Carbon, %	1.47				

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Soil Analysis Report

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40488

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : PHILLIPS ROCKAWALK
Sample ID : BPRIB

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.84				
Phosphorus, ppm P	497				
P Saturation	95				
Potassium, ppm K	72				
Calcium, ppm Ca	641				
Magnesium, ppm Mg	115				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	4.9				
H % Saturation	11				
K % Saturation	4				
Ca % Saturation	65				
Mg % Saturation	19				
Na % Saturation	1				
Organic Matter, %	1.08				
Est. Organic Carbon, %	0.63				

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CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3370

Results For : CALLOWAY BROTHERS
Location : PHILLIPS ROCKAWALKI
Sample ID : BPR1F

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.89				
Phosphorus, ppm P	410				
P Saturation	89				
Potassium, ppm K	63				
Calcium, ppm Ca	475				
Magnesium, ppm Mg	79				
Sodium, ppm Na	10				
CEC Sum of Cations, meq/100g	3.6				
H % Saturation	10				
K % Saturation	4				
Ca % Saturation	66				
Mg % Saturation	18				
Na % Saturation	1				
Organic Matter, %	2.77				
Est. Organic Carbon, %	1.61				

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Soil Analysis Report

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40489

CALLOWAY
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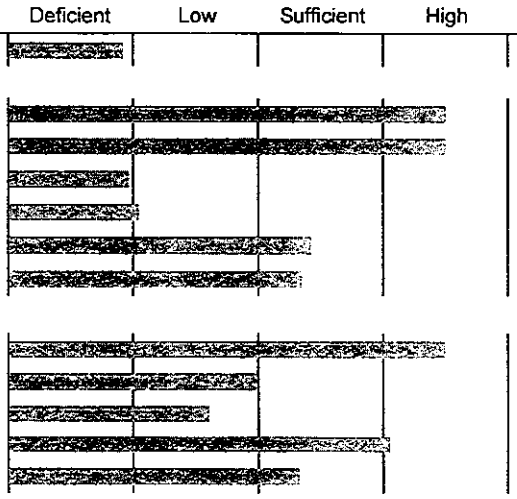
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : PHILLIPS ROCKAWALK
Sample ID : BPR2B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.1
Buffer pH	6.68
Phosphorus, ppm P	393
P Saturation	96
Potassium, ppm K	45
Calcium, ppm Ca	264
Magnesium, ppm Mg	94
Sodium, ppm Na	12
CEC Sum of Cations, meq/100g	3.6
H % Saturation	37
K % Saturation	3
Ca % Saturation	36
Mg % Saturation	22
Na % Saturation	1
Organic Matter, %	1.03
Est. Organic Carbon, %	0.60



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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3372

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : PHILLIPS ROCKAWALKI
Sample ID : BPR2F

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.82				
Phosphorus, ppm P	400				
P Saturation	89				
Potassium, ppm K	54				
Calcium, ppm Ca	296				
Magnesium, ppm Mg	35				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	2.6				
H % Saturation	25				
K % Saturation	5				
Ca % Saturation	56				
Mg % Saturation	11				
Na % Saturation	2				
Organic Matter, %	2.64				
Est. Organic Carbon, %	1.53				

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Soil Analysis Report

CALLOWAY
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MARDELA SPRINGS **MD 21837**

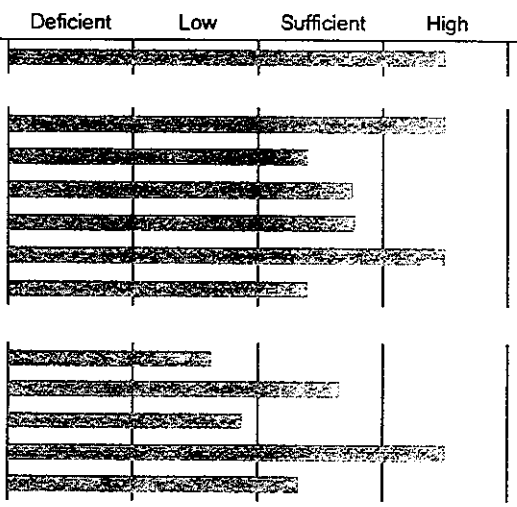
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4550

Results For : CALLOWAY BROTHERS
Location : V PHILLIPS H[redacted] Twiller
Sample ID : VPT1+4

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.9
Buffer pH	6.9
Phosphorus, ppm P	119
P Saturation	35
Potassium, ppm K	161
Calcium, ppm Ca	892
Magnesium, ppm Mg	369
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	8.4
H % Saturation	5
K % Saturation	5
Ca % Saturation	52
Mg % Saturation	37
Na % Saturation	1
Organic Matter, %	3.0
Est. Organic Carbon, %	1.74



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Soil Analysis Report

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40487

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : [redacted] PHILLIPS, V-Twiller
Sample ID : VPT2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.8				
Buffer pH	6.95				
Phosphorus, ppm P	136				
P Saturation	47				
Potassium, ppm K	54				
Calcium, ppm Ca	366				
Magnesium, ppm Mg	154				
Sodium, ppm Na	11				
CEC Sum of Cations, meq/100g	3.5				
H % Saturation	5				
K % Saturation	4				
Ca % Saturation	53				
Mg % Saturation	37				
Na % Saturation	1				
Organic Matter, %	0.53				
Est. Organic Carbon, %	0.31				

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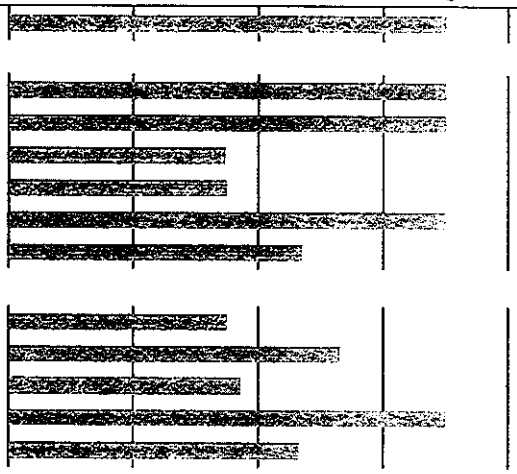
MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4552

Results For : CALLOWAY BROTHERS
Location : V PHILLIPS [redacted] Twilley
Sample ID : VPT3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	6.8	
Buffer pH	6.9	
Phosphorus, ppm P	199	
P Saturation	53	
Potassium, ppm K	79	
Calcium, ppm Ca	440	
Magnesium, ppm Mg	192	
Sodium, ppm Na	12	
CEC Sum of Cations, meq/100g	4.3	
H % Saturation	6	
K % Saturation	5	
Ca % Saturation	51	
Mg % Saturation	37	
Na % Saturation	1	
Organic Matter, %	1.1	
Est. Organic Carbon, %	0.65	



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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3375

Results For : CALLOWAY BROTHERS
Location : PAIGE PILCHARD
Sample ID : PPA1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.77				
Phosphorus, ppm P	107				
P Saturation	24				
Potassium, ppm K	106				
Calcium, ppm Ca	929				
Magnesium, ppm Mg	63				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	6.2				
H % Saturation	12				
K % Saturation	4				
Ca % Saturation	74				
Mg % Saturation	8				
Na % Saturation	1				
Organic Matter, %	2.70				
Est. Organic Carbon, %	1.57				

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Soil Analysis Report

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3376

Results For : CALLOWAY BROTHERS
Location : PAIGE PILCHARD
Sample ID : PPA2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.82				
Phosphorus, ppm P	25				
P Saturation	9				
Potassium, ppm K	58				
Calcium, ppm Ca	863				
Magnesium, ppm Mg	34				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	5.4				
H % Saturation	11				
K % Saturation	3				
Ca % Saturation	80				
Mg % Saturation	5				
Na % Saturation	1				
Organic Matter, %	2.62				
Est. Organic Carbon, %	1.52				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3377

Results For : CALLOWAY BROTHERS
Location : PAIGE PILCHARD
Sample ID : PPA3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.4				
Buffer pH	6.80				
Phosphorus, ppm P	59				
P Saturation	21				
Potassium, ppm K	46				
Calcium, ppm Ca	1073				
Magnesium, ppm Mg	52				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	6.6				
H % Saturation	9				
K % Saturation	2				
Ca % Saturation	81				
Mg % Saturation	7				
Na % Saturation	1				
Organic Matter, %	2.39				
Est. Organic Carbon, %	1.38				

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Soil Analysis Report

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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4433

Results For : CALLOWAY BROTHERS
Location : WILL REYNOLDS
Sample ID : WR1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.8				
Phosphorus, ppm P	262				
P Saturation	81				
Potassium, ppm K	33				
Calcium, ppm Ca	296				
Magnesium, ppm Mg	73				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	2.8				
H % Saturation	20				
K % Saturation	3				
Ca % Saturation	53				
Mg % Saturation	22				
Na % Saturation	2				
Organic Matter, %	1.2				
Est. Organic Carbon, %	0.72				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4434

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : WILL REYNOLDS
Sample ID : WR2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.7				
Phosphorus, ppm P	198				
P Saturation	27				
Potassium, ppm K	44				
Calcium, ppm Ca	317				
Magnesium, ppm Mg	53				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	3.2				
H % Saturation	32				
K % Saturation	4				
Ca % Saturation	48				
Mg % Saturation	14				
Na % Saturation	2				
Organic Matter, %	3.4				
Est. Organic Carbon, %	1.96				

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Soil Analysis Report

Invoice No. : 1155829
Date Received : 01/31/2025
Date Analyzed: 02/03/2025
Lab Number : 40471

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : JOBY SAULSBURY
Sample ID : JS1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.9				
Buffer pH	6.66				
Phosphorus, ppm P	208				
P Saturation	33				
Potassium, ppm K	98				
Calcium, ppm Ca	857				
Magnesium, ppm Mg	143				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	7.0				
H % Saturation	17				
K % Saturation	4				
Ca % Saturation	61				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	2.79				
Est. Organic Carbon, %	1.62				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4436

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : JOBY SAULSBURY
Sample ID : JS3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.8				
Phosphorus, ppm P	186				
P Saturation	50				
Potassium, ppm K	27				
Calcium, ppm Ca	167				
Magnesium, ppm Mg	114				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	2.8				
H % Saturation	32				
K % Saturation	2				
Ca % Saturation	30				
Mg % Saturation	34				
Na % Saturation	2				
Organic Matter, %	1.7				
Est. Organic Carbon, %	1.01				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4438

CALLOWAY
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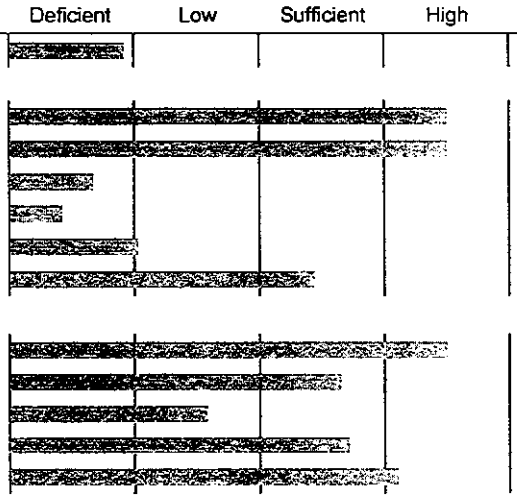
Results For : CALLOWAY BROTHERS
Location : JOBY SAULSBURY
Sample ID : JS4

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.1
Buffer pH	6.9
Phosphorus, ppm P	206
P Saturation	55
Potassium, ppm K	31
Calcium, ppm Ca	110
Magnesium, ppm Mg	34
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	1.6
H % Saturation	38
K % Saturation	5
Ca % Saturation	35
Mg % Saturation	18
Na % Saturation	4
Organic Matter, %	0.7
Est. Organic Carbon, %	0.41



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Soil Analysis Report

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Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4484

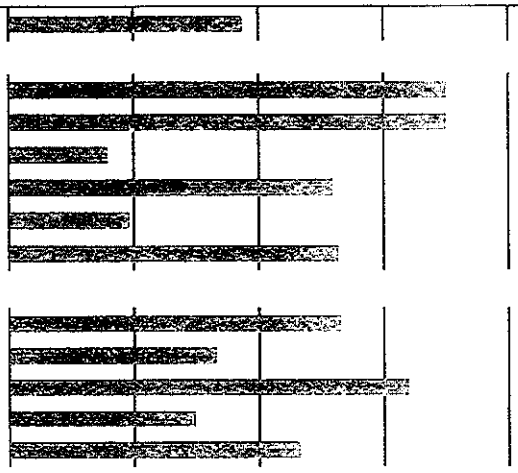
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : SANDRA SAULSBURY
Sample ID : S1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.9
Buffer pH	6.7
Phosphorus, ppm P	460
P Saturation	152
Potassium, ppm K	37
Calcium, ppm Ca	798
Magnesium, ppm Mg	32
Sodium, ppm Na	18
CEC Sum of Cations, meq/100g	5.3
H % Saturation	16
K % Saturation	2
Ca % Saturation	76
Mg % Saturation	5
Na % Saturation	1
Organic Matter, %	1.1
Est. Organic Carbon, %	0.66



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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4485

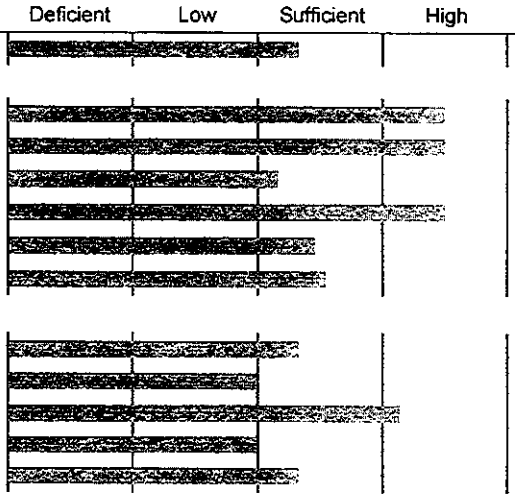
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : SANDRA SAULSBURY
Sample ID : S2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.2
Buffer pH	6.7
Phosphorus, ppm P	383
P Saturation	58
Potassium, ppm K	107
Calcium, ppm Ca	1215
Magnesium, ppm Mg	96
Sodium, ppm Na	16
CEC Sum of Cations, meq/100g	8.2
H % Saturation	12
K % Saturation	3
Ca % Saturation	74
Mg % Saturation	10
Na % Saturation	1
Organic Matter, %	4.0
Est. Organic Carbon, %	2.29



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Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4486

CALLOWAY
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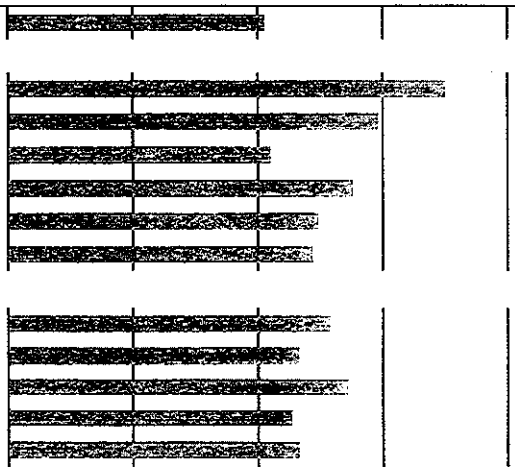
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : SANDRA SAULSBURY
Sample ID : S3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.0
Buffer pH	6.7
Phosphorus, ppm P	235
P Saturation	49
Potassium, ppm K	101
Calcium, ppm Ca	886
Magnesium, ppm Mg	98
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	6.5
H % Saturation	15
K % Saturation	4
Ca % Saturation	67
Mg % Saturation	13
Na % Saturation	1
Organic Matter, %	3.9
Est. Organic Carbon, %	2.29



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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3384

Results For : CALLOWAY BROTHERS
Location : LOUISE SHERMAN
Sample ID : LS1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.8				
Buffer pH	6.96				
Phosphorus, ppm P	147				
P Saturation	55				
Potassium, ppm K	32				
Calcium, ppm Ca	304				
Magnesium, ppm Mg	53				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	2.2				
H % Saturation	5				
K % Saturation	4				
Ca % Saturation	69				
Mg % Saturation	20				
Na % Saturation	2				
Organic Matter, %	0.79				
Est. Organic Carbon, %	0.46				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4530

Results For : CALLOWAY BROTHERS
Location : APRIL SHILES
Sample ID : AS2A

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.9				
Phosphorus, ppm P	256				
P Saturation	59				
Potassium, ppm K	57				
Calcium, ppm Ca	289				
Magnesium, ppm Mg	88				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	2.6				
H % Saturation	10				
K % Saturation	6				
Ca % Saturation	54				
Mg % Saturation	28				
Na % Saturation	2				
Organic Matter, %	0.9				
Est. Organic Carbon, %	0.52				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4531

Results For : CALLOWAY BROTHERS
Location : APRIL SHILES
Sample ID : AS2B

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.8				
Phosphorus, ppm P	250				
P Saturation	63				
Potassium, ppm K	98				
Calcium, ppm Ca	217				
Magnesium, ppm Mg	62				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.6				
H % Saturation	26				
K % Saturation	10				
Ca % Saturation	41				
Mg % Saturation	20				
Na % Saturation	3				
Organic Matter, %	1.0				
Est. Organic Carbon, %	0.58				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4559

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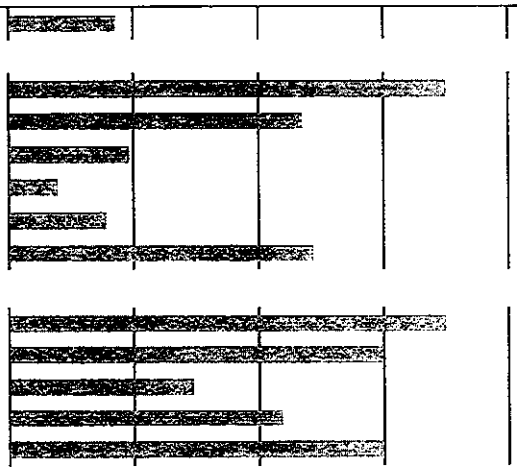
Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	4.8
Buffer pH	6.6
Phosphorus, ppm P	120
P Saturation	34
Potassium, ppm K	45
Calcium, ppm Ca	100
Magnesium, ppm Mg	26
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	1.8
H % Saturation	50
K % Saturation	6
Ca % Saturation	28
Mg % Saturation	12
Na % Saturation	3
Organic Matter, %	2.7
Est. Organic Carbon, %	1.54



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Soil Analysis Report

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4560

Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.8				
Phosphorus, ppm P	208				
P Saturation	38				
Potassium, ppm K	165				
Calcium, ppm Ca	562				
Magnesium, ppm Mg	135				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	5.2				
H % Saturation	14				
K % Saturation	8				
Ca % Saturation	54				
Mg % Saturation	22				
Na % Saturation	1				
Organic Matter, %	2.7				
Est. Organic Carbon, %	1.54				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4561

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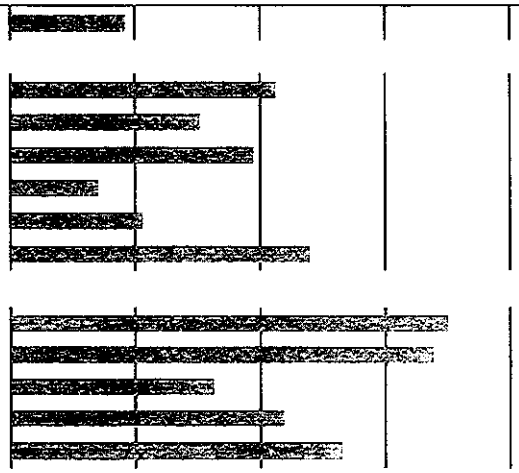
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH4+9

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.1
Buffer pH	6.8
Phosphorus, ppm P	56
P Saturation	13
Potassium, ppm K	89
Calcium, ppm Ca	177
Magnesium, ppm Mg	35
Sodium, ppm Na	13
CEC Sum of Cations, meq/100g	2.4
H % Saturation	40
K % Saturation	9
Ca % Saturation	37
Mg % Saturation	12
Na % Saturation	2
Organic Matter, %	2.2
Est. Organic Carbon, %	1.30



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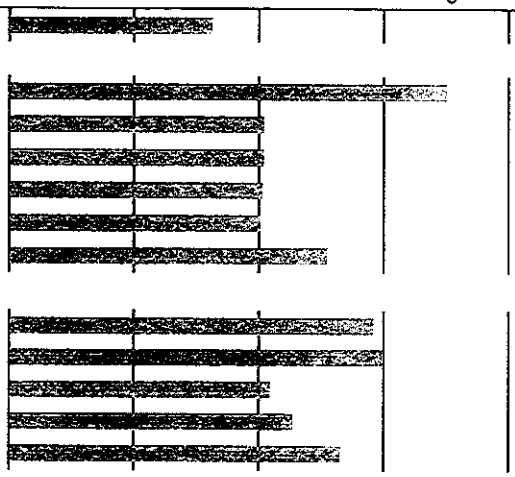
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4562

Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH5

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.8
Buffer pH	6.8
Phosphorus, ppm P	114
P Saturation	26
Potassium, ppm K	95
Calcium, ppm Ca	517
Magnesium, ppm Mg	67
Sodium, ppm Na	16
CEC Sum of Cations, meq/100g	4.2
H % Saturation	19
K % Saturation	6
Ca % Saturation	60
Mg % Saturation	13
Na % Saturation	2
Organic Matter, %	2.4
Est. Organic Carbon, %	1.40



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Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4563

Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH6

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.4				
Buffer pH	6.8				
Phosphorus, ppm P	141				
P Saturation	31				
Potassium, ppm K	89				
Calcium, ppm Ca	241				
Magnesium, ppm Mg	44				
Sodium, ppm Na	17				
CEC Sum of Cations, meq/100g	2.6				
H % Saturation	29				
K % Saturation	9				
Ca % Saturation	45				
Mg % Saturation	14				
Na % Saturation	3				
Organic Matter, %	1.8				
Est. Organic Carbon, %	1.07				

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4564

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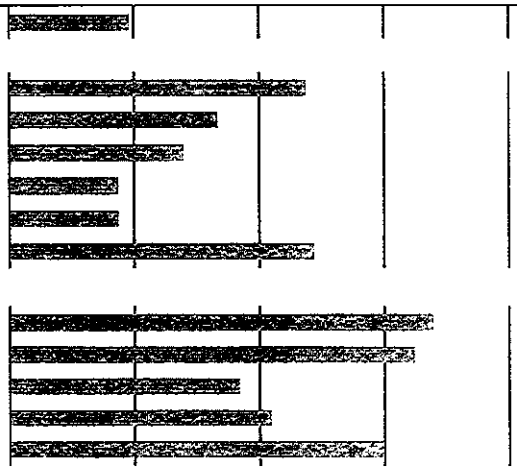
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH7

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.4
Buffer pH	6.8
Phosphorus, ppm P	69
P Saturation	17
Potassium, ppm K	64
Calcium, ppm Ca	218
Magnesium, ppm Mg	29
Sodium, ppm Na	14
CEC Sum of Cations, meq/100g	2.2
H % Saturation	28
K % Saturation	8
Ca % Saturation	50
Mg % Saturation	11
Na % Saturation	3
Organic Matter, %	2.0
Est. Organic Carbon, %	1.17



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Date Analyzed: 01/27/2023
Lab Number : 4566

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Results For : CALLOWAY BROTHERS
Location : SHOCKLEY
Sample ID : SH8

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.8				
Buffer pH	6.8				
Phosphorus, ppm P	63				
P Saturation	14				
Potassium, ppm K	115				
Calcium, ppm Ca	507				
Magnesium, ppm Mg	109				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	4.6				
H % Saturation	18				
K % Saturation	6				
Ca % Saturation	54				
Mg % Saturation	19				
Na % Saturation	1				
Organic Matter, %	3.5				
Est. Organic Carbon, %	2.05				

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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3323

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : SPEAR
Sample ID : SP1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.6				
Buffer pH	6.92				
Phosphorus, ppm P	242				
P Saturation	55				
Potassium, ppm K	119				
Calcium, ppm Ca	533				
Magnesium, ppm Mg	84				
Sodium, ppm Na	3				
CEC Sum of Cations, meq/100g	4.0				
H % Saturation	7				
K % Saturation	8				
Ca % Saturation	67				
Mg % Saturation	18				
Na % Saturation	0				
Organic Matter, %	1.65				
Est. Organic Carbon, %	0.96				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3324

Results For : CALLOWAY BROTHERS
Location : SPEAR
Sample ID : SP2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	7.1				
Buffer pH	7.00				
Phosphorus, ppm P	200				
P Saturation	72				
Potassium, ppm K	38				
Calcium, ppm Ca	580				
Magnesium, ppm Mg	72				
Sodium, ppm Na	4				
CEC Sum of Cations, meq/100g	3.8				
H % Saturation	4				
K % Saturation	3				
Ca % Saturation	77				
Mg % Saturation	16				
Na % Saturation	0				
Organic Matter, %	1.06				
Est. Organic Carbon, %	0.61				

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Soil Analysis Report

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3325

Results For : CALLOWAY BROTHERS
Location : SPEAR
Sample ID : SP4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.1				
Buffer pH	6.90				
Phosphorus, ppm P	215				
P Saturation	65				
Potassium, ppm K	51				
Calcium, ppm Ca	358				
Magnesium, ppm Mg	47				
Sodium, ppm Na	4				
CEC Sum of Cations, meq/100g	2.7				
H % Saturation	12				
K % Saturation	5				
Ca % Saturation	67				
Mg % Saturation	15				
Na % Saturation	1				
Organic Matter, %	1.49				
Est. Organic Carbon, %	0.86				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4532

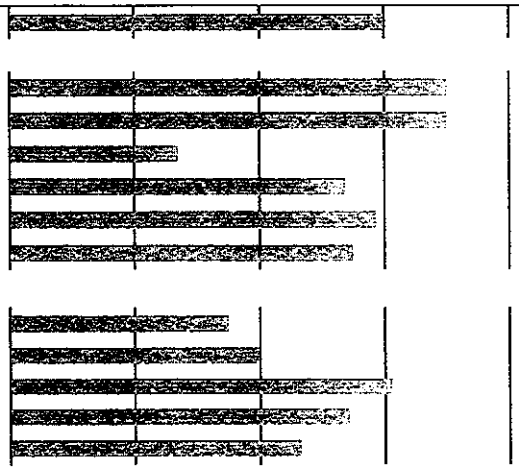
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : TODD
Sample ID : T1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.7
Buffer pH	6.9
Phosphorus, ppm P	362
P Saturation	99
Potassium, ppm K	62
Calcium, ppm Ca	848
Magnesium, ppm Mg	127
Sodium, ppm Na	20
CEC Sum of Cations, meq/100g	5.9
H % Saturation	6
K % Saturation	3
Ca % Saturation	72
Mg % Saturation	18
Na % Saturation	1
Organic Matter, %	1.0
Est. Organic Carbon, %	0.57



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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4534

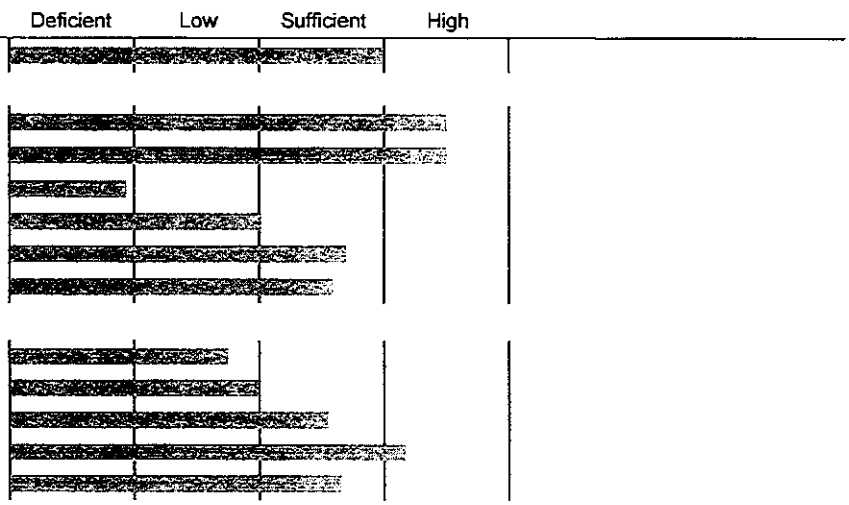
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : TODD
Sample ID : T2

Extraction Method: Mehlich 3

	Analysis
pH	6.7
Buffer pH	6.9
Phosphorus, ppm P	243
P Saturation	75
Potassium, ppm K	43
Calcium, ppm Ca	508
Magnesium, ppm Mg	112
Sodium, ppm Na	17
CEC Sum of Cations, meq/100g	3.9
H % Saturation	6
K % Saturation	3
Ca % Saturation	65
Mg % Saturation	24
Na % Saturation	2
Organic Matter, %	1.1
Est. Organic Carbon, %	0.62

Sufficiency Levels



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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4567

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : ERIC TWILLEY
Sample ID : ET1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	7.5	
Buffer pH	7.0	
Phosphorus, ppm P	179	
P Saturation	77	
Potassium, ppm K	62	
Calcium, ppm Ca	4301	
Magnesium, ppm Mg	118	
Sodium, ppm Na	51	
CEC Sum of Cations, meq/100g	23.3	
H % Saturation	2	
K % Saturation	1	
Ca % Saturation	92	
Mg % Saturation	4	
Na % Saturation	1	
Organic Matter, %	1.4	
Est. Organic Carbon, %	0.80	

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Soil Analysis Report

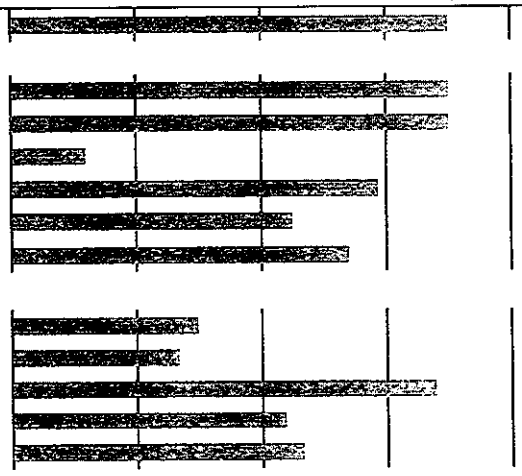
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4568

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : ERIC TWILLEY
Sample ID : ET2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels (Deficient / Low / Sufficient / High)
pH	7.0	
Buffer pH	7.0	
Phosphorus, ppm P	295	
P Saturation	87	
Potassium, ppm K	28	
Calcium, ppm Ca	965	
Magnesium, ppm Mg	82	
Sodium, ppm Na	19	
CEC Sum of Cations, meq/100g	5.9	
H % Saturation	4	
K % Saturation	1	
Ca % Saturation	82	
Mg % Saturation	12	
Na % Saturation	1	
Organic Matter, %	1.3	
Est. Organic Carbon, %	0.73	



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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3385

CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : HENRY WANG
Sample ID : HW1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.3				
Buffer pH	6.80				
Phosphorus, ppm P	78				
P Saturation	19				
Potassium, ppm K	93				
Calcium, ppm Ca	263				
Magnesium, ppm Mg	25				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	2.6				
H % Saturation	32				
K % Saturation	9				
Ca % Saturation	50				
Mg % Saturation	8				
Na % Saturation	1				
Organic Matter, %	2.56				
Est. Organic Carbon, %	1.49				

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Soil Analysis Report

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3386

CALLOWAY
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MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : HENRY WANG
Sample ID : HW2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.0				
Buffer pH	6.60				
Phosphorus, ppm P	163				
P Saturation	47				
Potassium, ppm K	71				
Calcium, ppm Ca	163				
Magnesium, ppm Mg	24				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	2.1				
H % Saturation	42				
K % Saturation	9				
Ca % Saturation	38				
Mg % Saturation	9				
Na % Saturation	2				
Organic Matter, %	1.95				
Est. Organic Carbon, %	1.13				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4491

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : PHILLIS WEBSTER
Sample ID : BR1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.5				
Buffer pH	6.9				
Phosphorus, ppm P	241				
P Saturation	62				
Potassium, ppm K	75				
Calcium, ppm Ca	200				
Magnesium, ppm Mg	38				
Sodium, ppm Na	13				
CEC Sum of Cations, meq/100g	2.1				
H % Saturation	26				
K % Saturation	9				
Ca % Saturation	47				
Mg % Saturation	15				
Na % Saturation	3				
Organic Matter, %	1.4				
Est. Organic Carbon, %	0.80				

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Soil Analysis Report

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4492

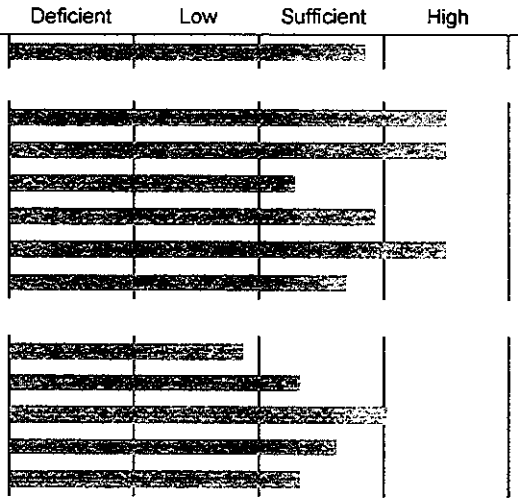
CALLOWAY
CALLOWAY BROTHERS
8381 ATHOL ROAD
MARDELA SPRINGS MD 21837

Results For : CALLOWAY BROTHERS
Location : PHILLIS WEBSTER
Sample ID : BR2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	6.6
Buffer pH	6.9
Phosphorus, ppm P	478
P Saturation	104
Potassium, ppm K	117
Calcium, ppm Ca	965
Magnesium, ppm Mg	141
Sodium, ppm Na	19
CEC Sum of Cations, meq/100g	6.8
H % Saturation	7
K % Saturation	4
Ca % Saturation	71
Mg % Saturation	17
Na % Saturation	1
Organic Matter, %	1.8
Est. Organic Carbon, %	1.06



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MARDELA SPRINGS MD 21837

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4493

Results For : CALLOWAY BROTHERS
Location : PHILLIS WEBSTER
Sample ID : BR3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	6.2				
Buffer pH	6.9				
Phosphorus, ppm P	185				
P Saturation	40				
Potassium, ppm K	128				
Calcium, ppm Ca	447				
Magnesium, ppm Mg	100				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	3.9				
H % Saturation	11				
K % Saturation	8				
Ca % Saturation	57				
Mg % Saturation	21				
Na % Saturation	2				
Organic Matter, %	1.7				
Est. Organic Carbon, %	0.99				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4494

Results For : CALLOWAY BROTHERS
Location : PHILLIS WEBSTER
Sample ID : BR4

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.2				
Buffer pH	6.8				
Phosphorus, ppm P	227				
P Saturation	55				
Potassium, ppm K	99				
Calcium, ppm Ca	184				
Magnesium, ppm Mg	37				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.4				
H % Saturation	36				
K % Saturation	10				
Ca % Saturation	38				
Mg % Saturation	13				
Na % Saturation	3				
Organic Matter, %	2.2				
Est. Organic Carbon, %	1.25				

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4495

Results For : CALLOWAY BROTHERS
Location : PHILLIS WEBSTER
Sample ID : BR5

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.1				
Buffer pH	6.8				
Phosphorus, ppm P	32				
P Saturation	12				
Potassium, ppm K	59				
Calcium, ppm Ca	138				
Magnesium, ppm Mg	46				
Sodium, ppm Na	15				
CEC Sum of Cations, meq/100g	2.1				
H % Saturation	38				
K % Saturation	7				
Ca % Saturation	33				
Mg % Saturation	19				
Na % Saturation	3				
Organic Matter, %	1.3				
Est. Organic Carbon, %	0.75				

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Soil Analysis Report

CALLOWAY
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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3348

Results For : CALLOWAY BROTHERS
Location : R TAYLOR WHITE
Sample ID : TW1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.3				
Buffer pH	6.93				
Phosphorus, ppm P	108				
P Saturation	38				
Potassium, ppm K	54				
Calcium, ppm Ca	278				
Magnesium, ppm Mg	94				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	2.6				
H % Saturation	10				
K % Saturation	5				
Ca % Saturation	53				
Mg % Saturation	30				
Na % Saturation	2				
Organic Matter, %	1.76				
Est. Organic Carbon, %	1.02				

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Soil Analysis Report

CALLOWAY
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MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3349

Results For : CALLOWAY BROTHERS
Location : R TAYLOR WHITE
Sample ID : TW2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.0				
Buffer pH	6.88				
Phosphorus, ppm P	37				
P Saturation	13				
Potassium, ppm K	100				
Calcium, ppm Ca	301				
Magnesium, ppm Mg	93				
Sodium, ppm Na	9				
CEC Sum of Cations, meq/100g	3.0				
H % Saturation	15				
K % Saturation	8				
Ca % Saturation	50				
Mg % Saturation	25				
Na % Saturation	1				
Organic Matter, %	2.30				
Est. Organic Carbon, %	1.33				

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Soil Analysis Report

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3350

Results For : CALLOWAY BROTHERS
Location : R TAYLOR WHITE
Sample ID : TW3 4

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.9				
Buffer pH	7.00				
Phosphorus, ppm P	143				
P Saturation	52				
Potassium, ppm K	66				
Calcium, ppm Ca	532				
Magnesium, ppm Mg	163				
Sodium, ppm Na	11				
CEC Sum of Cations, meq/100g	4.4				
H % Saturation	4				
K % Saturation	4				
Ca % Saturation	60				
Mg % Saturation	31				
Na % Saturation	1				
Organic Matter, %	1.91				
Est. Organic Carbon, %	1.11				

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Soil Analysis Report

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MARDELA SPRINGS **MD 21837**

Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4574

Results For : CALLOWAY BROTHERS
Location : DONALD WILSON
Sample ID : DW1+2

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.8				
Phosphorus, ppm P	124				
P Saturation	29				
Potassium, ppm K	141				
Calcium, ppm Ca	368				
Magnesium, ppm Mg	79				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	3.7				
H % Saturation	21				
K % Saturation	10				
Ca % Saturation	50				
Mg % Saturation	18				
Na % Saturation	1				
Organic Matter, %	2.4				
Est. Organic Carbon, %	1.38				

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Soil Analysis Report

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Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4575

Results For : CALLOWAY BROTHERS
Location : DONALD WILSON
Sample ID : DW3

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis	Deficient	Low	Sufficient	High
pH	5.7				
Buffer pH	6.8				
Phosphorus, ppm P	71				
P Saturation	21				
Potassium, ppm K	116				
Calcium, ppm Ca	396				
Magnesium, ppm Mg	93				
Sodium, ppm Na	14				
CEC Sum of Cations, meq/100g	3.9				
H % Saturation	21				
K % Saturation	8				
Ca % Saturation	49				
Mg % Saturation	20				
Na % Saturation	2				
Organic Matter, %	1.8				
Est. Organic Carbon, %	1.02				

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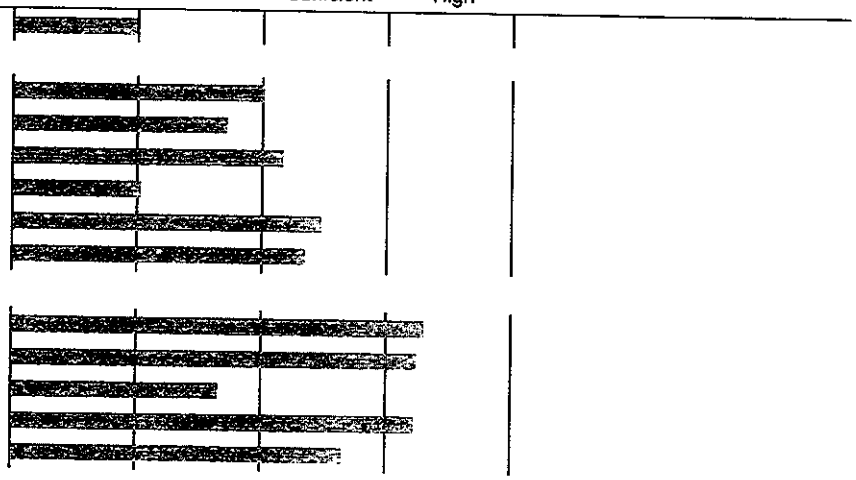
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4576

Results For : CALLOWAY BROTHERS
Location : DONALD WILSON
Sample ID : DW4

Extraction Method: Mehlich 3

	Analysis
pH	5.5
Buffer pH	6.8
Phosphorus, ppm P	51
P Saturation	18
Potassium, ppm K	107
Calcium, ppm Ca	259
Magnesium, ppm Mg	97
Sodium, ppm Na	12
CEC Sum of Cations, meq/100g	3.3
H % Saturation	26
K % Saturation	8
Ca % Saturation	39
Mg % Saturation	25
Na % Saturation	2
Organic Matter, %	1.4
Est. Organic Carbon, %	0.81

Sufficiency Levels



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Soil Analysis Report

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MARDELA SPRINGS **MD 21837**

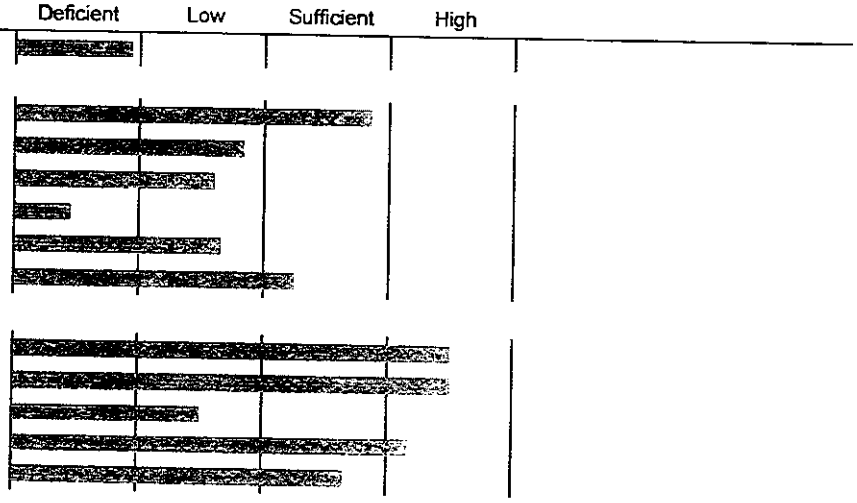
Invoice No. : 1139693
Date Received : 01/26/2023
Date Analyzed: 01/27/2023
Lab Number : 4577

Results For : CALLOWAY BROTHERS
Location : STANFORD WILSON
Sample ID : LW1

Extraction Method: Mehlich 3

Sufficiency Levels

	Analysis
pH	5.2
Buffer pH	6.9
Phosphorus, ppm P	93
P Saturation	21
Potassium, ppm K	74
Calcium, ppm Ca	115
Magnesium, ppm Mg	55
Sodium, ppm Na	10
CEC Sum of Cations, meq/100g	1.9
H % Saturation	34
K % Saturation	10
Ca % Saturation	30
Mg % Saturation	24
Na % Saturation	2
Organic Matter, %	1.8
Est. Organic Carbon, %	1.07



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Soil Analysis Report

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8381 ATHOL ROAD
MARDELA SPRINGS **MD 21837**

Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3378

Results For : CALLOWAY BROTHERS
Location : GEORGE WOGLHMAN
Sample ID : EP1

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.6				
Buffer pH	6.88				
Phosphorus, ppm P	93				
P Saturation	21				
Potassium, ppm K	62				
Calcium, ppm Ca	221				
Magnesium, ppm Mg	32				
Sodium, ppm Na	7				
CEC Sum of Cations, meq/100g	2.0				
H % Saturation	24				
K % Saturation	8				
Ca % Saturation	53				
Mg % Saturation	13				
Na % Saturation	2				
Organic Matter, %	1.38				
Est. Organic Carbon, %	0.80				

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3379

Results For : CALLOWAY BROTHERS
Location : GEORGE WOGLHMAN
Sample ID : EP2

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	5.0				
Buffer pH	6.60				
Phosphorus, ppm P	468				
P Saturation	86				
Potassium, ppm K	48				
Calcium, ppm Ca	91				
Magnesium, ppm Mg	24				
Sodium, ppm Na	8				
CEC Sum of Cations, meq/100g	1.4				
H % Saturation	42				
K % Saturation	9				
Ca % Saturation	31				
Mg % Saturation	15				
Na % Saturation	3				
Organic Matter, %	1.18				
Est. Organic Carbon, %	0.69				

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Soil Analysis Report

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Invoice No. : 1148287
Date Received : 02/06/2024
Date Analyzed: 02/07/2024
Lab Number : 3380

Results For : CALLOWAY BROTHERS
Location : GEORGE WOGLHMAN
Sample ID : EP3

Extraction Method: Mehlich 3

	Analysis	Sufficiency Levels: Deficient	Low	Sufficient	High
pH	6.7				
Buffer pH	6.91				
Phosphorus, ppm P	285				
P Saturation	51				
Potassium, ppm K	50				
Calcium, ppm Ca	740				
Magnesium, ppm Mg	101				
Sodium, ppm Na	12				
CEC Sum of Cations, meq/100g	5.0				
H % Saturation	6				
K % Saturation	3				
Ca % Saturation	73				
Mg % Saturation	17				
Na % Saturation	1				
Organic Matter, %	4.28				
Est. Organic Carbon, %	2.48				

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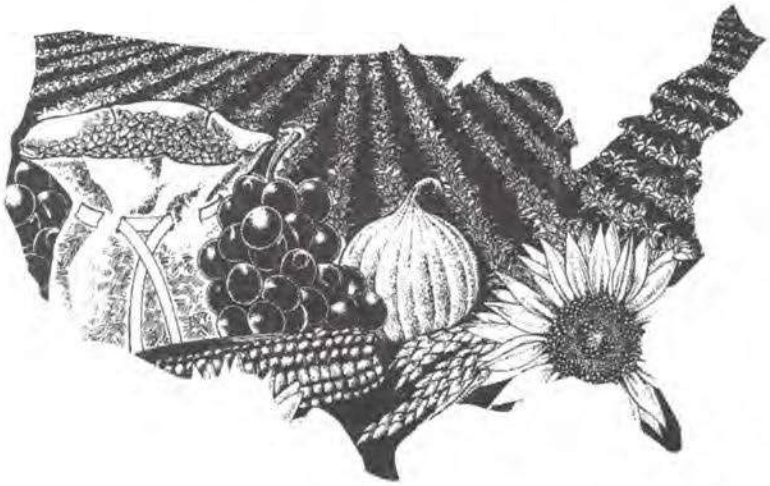
Best Management Practices

Today's Agriculture:
A Responsible Legacy

Nutrient Best Management Practices



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Delaware Nutrient Management Commission
Delaware Department of Agriculture
USDA Natural Resources Conservation Service
Delaware Department of Natural Resources and Environmental Control
University of Delaware Cooperative Extension
Delaware Conservation Districts

Approved and paid by the Delaware Nutrient Management Commission

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BMP IDENTIFICATION FOR TRADITIONAL AGRICULTURE:

1. Feed Related Amendments

Feeding strategies to reduce nutrient excretion in poultry litter and other manure have great potential today and into the future. With the addition of phytase to commercial broiler diets and the refinement of phosphorus requirements, excretion of phosphorus in litter is expected to decrease by more than 30%. As other cost-effective technologies are refined, such as vitamin D derivatives, the reduction of phosphorus in litter may well exceed 50% of today's values in the near future. Combined with more long-term strategies such as the inclusion of feed grains with higher available phosphorus content, the reduction in phosphorus may well be 70% less than litter just a few years ago.

2. Poultry Litter Amendments

Poultry litter amendments are one of several management strategies employed to reduce ammonia and odor emissions from poultry houses. These products can be added to litter, feed or water to chemically or biologically reduce the ammonia volatilization rate from litter. By reducing the ammonia losses from litter, the nitrogen content and value of the litter may be increased. Although the most common acidifying chemical litter amendments offer effective immediate ammonia control, they have limited longevity. Some aluminum, iron and calcium base acidic compounds have the added benefit, when used at rates above that typically required for ammonia control, of binding soluble phosphorus in litter. These products may be particularly beneficial for operations that must limit litter application due to high soil-test phosphorus or where the risk of soluble phosphorus losses from fields are high.

3. Roof Runoff Management in Feedlots

NRCS Practice Code: 588

Roof runoff management in feedlots is a system of components for collecting, controlling and disposing of runoff from roofs that would otherwise enter a feedlot and become contaminated. Components may include, but are not limited to, erosion-resistant channels, subsurface drains with rock filled trenches along building foundations below eves, underground outlets, roof gutters, downspouts and appurtenances.

4. Stormwater Control in Feedlots

Stormwater control in feedlots is a system of components for controlling runoff generated from a feedlot operation. Clean water from roofs and non-contaminated areas of the feedlot operation is kept separate from contaminated runoff leaving the feedlot. Contaminated runoff is to be captured, stored and safely disposed of as outlined in the nutrient management plan. Components may include, but are not limited to, underground outlets, diversions, grassed waterways, waste storage structures, and spray irrigation systems.

MANURE STORAGE

5. Temporary Storage

The most efficient method of handling and storing poultry litter results from handling the poultry litter as few times as possible. Ideally, total cleanouts and crust outs are immediately land applied, transported to an alternative use or to a storage structure. However, timing considerations may require temporary outdoor storage of the litter before use, which must be conducted while implementing best management practices.

In situations where temporary storage is needed litter may be stored temporarily to preserve litter quality and prevent application at the wrong time of the year. Temporary storage is the least preferred storage practice, but may be conducted according to the standards outlined below:

Production Area Storage	Non-Production Area Storage Up to 90 Days	Non-Production Area Storage Over 90 Days to 150 Days
"Production Area" means that part of an Animal Feeding Operation that includes the animal confinement area, the manure storage area, the raw materials storage area and the waste containment areas, also includes egg washing or processing facility and any area used in the storage, handling, treatment or disposal of mortalities.The Production Area should be defined in the operation's Nutrient Management Plan.	Temporary Storage away from the "Production Area" can be staged for land application and is limited to 90 days without the use of an impervious cover.	For conditions that require temporary storage of litter beyond 90 days, individual or general authorization may be granted by the DNMC or Delaware Department of Agriculture for storage up to 150 days. For any storage greater than 150 days, an impervious cover is required.
Temporary storage within the "Production Area" (as defined above) is limited to 14 days without the use of an impervious cover. The following BMP(s) are required for Production Area Storage: 1. The stockpile must be separated from any channeled runoff, standing water and other drainage systems such as roof runoff and down spouts. These following additional BMPs are required for Production Area Storage of 2-14 days: 2. The stockpile must be at least 6 feet high; and 3. The stockpile site must meet Natural Resources Conservation Service (NRCS) standard or other containment area lining (standards) approved by the DNMC.	The following BMPs are required for Non-Production Area Storage Up to 90 days: 1. The pile must be at least 6 feet high and in a conical cross section shape; and 2. Litter shall not consist of more than 5% crust out material; and 3. The selection of the temporary storage site must consider the highest, most practical site possible and shall not use the same site more than once every two years without a storage site that meets NRCS standards or other containment lining standards approved by the DNMC; and 4. The temporary storage sites must be identified in the nutrient management plan; and 5. The site must be located at least 100 feet from a public road, 100 hundred feet from any surface water and 200 feet from any residence not located on the property; and 6. The site must be at least 200 feet from a domestic well and 300 feet from a public water supply well; and 7. Post litter removal treatment must include the removal of all litter and the top 1-2 inches of topsoil if the topsoil is co-mingled with the litter to prevent nutrient loads; and 8. A production crop or cover must be established and maintained at the site as soon as practical following post removal treatment. 9. For temporary storage sites on soils classified as located within 1 ½ feet of the depth to the seasonal high water table, any <u>one</u> of the following practices must be implemented: a. The establishment of a storage site that meets NRCS standards or other containment lining standards approved by the DNMC; or b. The use of high carbon (content) material (straw, wood shavings, fodder) as the base of the pile at least 8 inches thick to serve as a barrier and easy post storage removal; or c. The use of powdered bentonite or similar material that will seal the area under the pile.	The following BMPs are required for Non-Production Area Storage Over 90 days: 1. The pile is to be constructed as large as possible and be at least 10 feet high and in a conical cross section shape; and 2. Litter shall not consist of more than 5% crust out material; and 3. The selection of the temporary storage site must consider the highest, most practical site possible and shall not use the same site more than once every two years without a storage site that meets NRCS standards or other containment lining standards approved by the DNMC; and 4. The temporary storage sites must be identified in the nutrient management plan; and 5. The site must be located at least 100 feet from a public road, 100 hundred feet from any surface water and 200 feet from any residence not located on the property; and 6. The site must be at least 200 feet from a domestic well and 300 feet from a public water supply well; and 7. Post litter removal treatment must include the removal of all litter and the top 1-2 inches of topsoil if the topsoil is co-mingled with the litter to prevent nutrient loads; and 8. A production crop or cover crop must be established and maintained at the site as soon as practical following post removal treatment; and 9. The establishment and maintenance of a 24-foot vegetative buffer surrounding the pile site. 10. For temporary storage sites on soils classified as located within 1 ½ feet of the depth to the seasonal high water table, any <u>one</u> of the following practices must be implemented: a. The establishment of a storage site that meets NRCS standards or other containment lining standards approved by the DNMC; or b. The use of high carbon (content) material (straw, wood shavings, fodder) as the base of the pile at least 8 inches thick to serve as a barrier and easy post storage removal; or c. The use of powdered bentonite or similar material that will seal the area under the pile.

6. Pasture Stream Fencing
NRCS Practice Code: 382

Pasture stream fencing is the installation of a suitable permanent structure that acts as a barrier between pastureland and a watercourse with the purpose of excluding livestock from the ditch or stream. The type of livestock using the pasture will determine the type of barrier used. Sheep and hogs may require woven wire fence, horses may require a wooden or non-injurious type of fence, while cattle can be controlled with barbed wire or electric fence. If the livestock depend on the watercourse for their water supply, a new watering facility may be required.

7. Manure Sheds - NRCS Practice Code: 313

A manure shed is a roofed building for stacking dry manure and protecting it from precipitation during the storage period. The shed needs to be large enough to accommodate the equipment delivering and removing the waste. The volume contained within the shed is based on the anticipated volume of manure plus bedding generated during the storage period as defined in the nutrient management plan. Spontaneous combustion of the manure in a shed can be a problem unless the precautions listed in the nutrient management plan are followed.

8. Dry Straw Based Manure Storage
NRCS Practice Code: 313

A dry straw-based storage structure is often called a stacking facility. It may be roofed or unroofed, and usually has sidewalls (or a curb), and a concrete floor. If runoff from the facility will occur, a cover or a system to filter (treat) the runoff or a system to collect and store the runoff will be required. The facility needs to be large enough to accommodate the equipment delivering and removing the waste. The volume contained within the facility is based on the anticipated volume of manure plus bedding generated during the storage period as defined in the nutrient management plan. The manure must contain enough straw to make the mixture stackable, and adsorb excess moisture.

9. Bunkers
NRCS Practice Code: 313

A bunker, while generally not preferred, is a waste stacking facility with a curb or walls, an impervious floor, and typically has no roof. This type of facility is used where the waste material has a large amount of cellulose bedding in it, such as straw, wood chips, or saw dust. This type of facility is not suitable for waste material that has sand bedding, or little or no cellulose bedding. The size of the bunker is based on the anticipated volume of manure plus bedding generated during the storage period as defined in the nutrient management plan. If runoff from the facility will occur, a cover or a system to filter (treat) the runoff or a system to collect and store the runoff will be required.

10. Liquid Manure Handling Systems
NRCS Practice Code: 312

A liquid manure handling system is a planned system in which all the necessary components are in place for collection, transporting, storing and disposing of liquid manure and contaminated runoff in a manner, which does not degrade air, soil, or water resources. Components may include, but are not limited to: debris basins,

dikes, diversions, fencing, grassed waterways, spray irrigation systems, pond sealing or lining, subsurface drains, surface drains, waste storage ponds, waste storage structures, and waste treatment lagoons.

11. Lagoons and Tank Systems

NRCS Practice Code: 359 (lagoon) and 313 (tank)

A lagoon is a waste treatment impoundment made by construction of an embankment and/or excavating a pit or dugout. The purpose of a lagoon is to treat manure and wastewater and thereby reduce pollution potential. An impermeable liner is an essential component of a lagoon. A lagoon can be either aerobic or anaerobic in process, and will have an established minimum and maximum operating level. The size of the lagoon is based on the selected process and the number and type of animals in the operation.

A tank is a storage structure for liquid manure and wastewater. The volume of the tank is based on the anticipated volume of manure and bedding plus wastewater generated during the storage period as defined in the nutrient management plan. Tanks must be impervious and provide for agitation of its contents before emptying because the liquid and solid portions of the waste will separate during the storage period. Remixing of the contents is necessary for the proper removal of the waste material. Sand bedding can be very difficult to remix with the liquid portion of the waste, and will reduce available storage volume when it accumulates in the bottom of the tank.

12. Slurry De-watering Systems

A slurry de-watering system is a planned system with all the components in place for collection, transporting, storing and separating the liquid portion of the waste from the solid portion. Components may include but are not limited to settling tanks, greenhouse type drying facilities, mechanical solids separators, storage sheds, storage tanks, spray irrigation systems and composting facilities.

13. Fertilizer Storage

Various State laws govern the safe handling and storage of inorganic nutrients, or fertilizers. For example, storing large quantities of liquid fertilizers may require construction of a permanent storage facility. The Department of Natural Resources and Environmental Control should be consulted regarding the laws in your area. In general, when storing fertilizers on the farm you should consider proximity to animals or feed storage areas, proximity to water supplies, location and construction of the mixing area, adequate labeling, and security (doors, locks, etc.). Storage areas should be routinely examined for leaks or spills, and to check the function of washing and first aid equipment. Potential problems can be minimized by storing only as much fertilizer as absolutely necessary in secured indoor facilities.

14. Nutrient Management Relocation

Animal Feeding Operations (AFOs) with inadequate land to apply animal waste or farms with high phosphorus, as determined by soil tests from an approved soil laboratory, should relocate nutrients to farms in need of nutrients or to alternative use

projects. Receiving farms need a Nutrient Management Plan to ensure proper application rates and methods. Alternative use projects are active in Delaware and are defined as the use of animal manure other than the application of raw material on land. These projects generally provide a renewable or recyclable product for alternative market places. Cost share funds may be available to assist in the transportation cost of relocating manure.

ANIMAL MORTALITY HANDLING

Daily Mortality:

15. Composters

NRCS Practice Code: 317

A composter is a facility for the biological treatment of the normal daily accumulation of dead animals from an animal feeding operation. The facility usually includes bins in which the carcasses are placed in layers with a carbon source (typically straw, corn cobs, or saw dust), poultry manure (which provides nitrogen and deters scavengers) and a small amount of water in accordance to a recipe which is established in the nutrient management plan. The facility typically includes a roof and a concrete floor. The biological activity that breaks down the organic material generates heat that will sterilize the final product. The material being composted requires one turning during the composting process to assure that contents initially placed near the edge of the bin are moved to the center for proper heating. The size of the composter is based on the number and type of animals to be composted.

16. Rendering for Large Animals

Animal mortality should be disposed of in a way that prevents contamination of surface and ground waters. Burial of large animal mortality should not be considered due to the potential for surface and ground water contamination. While composting is the typical and the preferred process of dealing with non-catastrophic animal mortalities, composting of large animal mortality, such as dairy cows or horses can be difficult due to animal weight and size. In the event of large animal mortality, rendering companies provide pick-up and delivery for a fee.

17. Composting of Large Animals

Composting is an efficient alternative for large animal carcass disposal. During composting, microorganisms create a "slow cook" process that causes the carcass to degrade. For microorganisms to do their job, a proper balance of water, nutrients, carbon, and air will allow the compost process to start and to continue at a rate that produces enough heat to kill pathogens in the compost mix. Sawdust and woodchips are the preferred carbon source because they provide an excellent contact surface for the animal carcass. The carcass should contain enough water to meet the 40- to 60-percent moisture required for composting. A dairy animal buried in sawdust 15 to 18 inches deep on all sides will enable microbes to begin their work. If the Carbon/Nitrogen ratio, moisture, and oxygen are at the proper levels, microorganisms will cause the compost mix to heat to temperatures ranging from 135 to 150°F, a good composting temperature. The compost mix won't heat properly if it is too dry or too wet. It takes up to six months for composting to degrade a mature dairy cow.

18. Freezer

A freezer is a unit capable of freezing and storing animal carcasses until such time as they can be removed offsite for recycling or rendering. The capacity of the freezer is based on the maximum daily weight of animal carcasses produced during a typical growing cycle and the estimated time between emptying events.

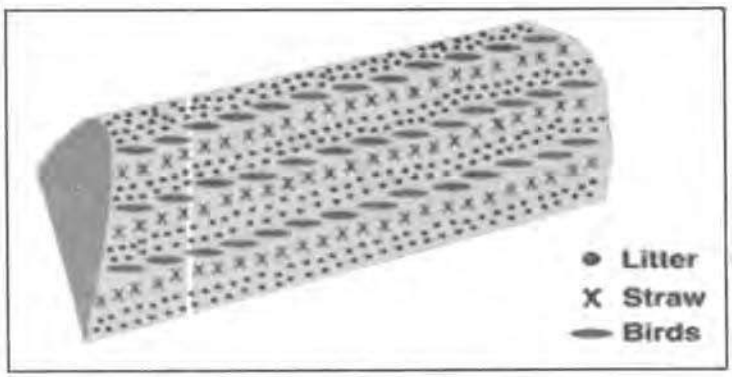
19. Incinerators (Ash disposal plan required)

NRCS Practice Code: 769

An incinerator is a device used to dispose of mortalities from a poultry-feeding operation by combustion. An incinerator requires an ash disposal plan. The ash disposal plan typically requires the use of an ash collection box or bucket, and disposal by land application on cropland or through a community trash disposal system. The capacity of an incinerator is based on the maximum daily weight of animal carcasses produced during a typical growing cycle. All incinerators must be registered with DNREC. Under current DNREC policy, only double-chambered incinerators with a burner in each chamber are approved for use in Delaware.

Catastrophic Animal Mortality:

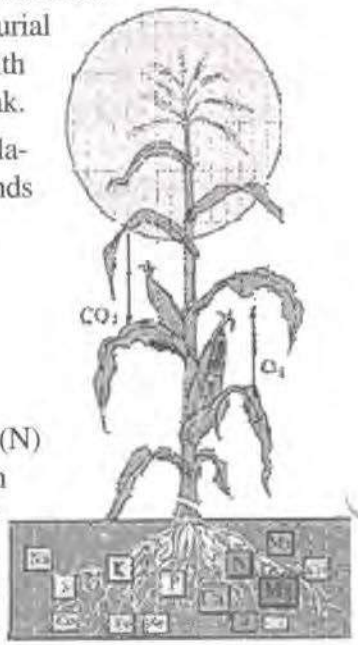
20. Composting Catastrophic Mortality of Poultry



The Delaware Nutrient Management Commission has identified composting as the preferred method of disposing of catastrophic mortality of poultry and other animals. Composting occurs when organic materials, such as dead birds, go through rapid decomposition in the presence of oxygen, water, and an adequate carbon source. Constructing a "wind row" composting pile can accommodate large quantities of poultry mortality. These piles are approximately 12 feet wide and 6 feet high. In these dimensions, the piles contain approximately 300 pounds of mortality per linear foot. Specific guidelines for constructing wind-row composting piles are available at http://www.agnr.umd.edu/MCE/Publications/PDFS/FS717.pdf

Alternatives to composting may be disposal of dead animals in a sanitary landfill. Additionally, in the event of a very serious, extremely communicable disease, mass burial on the infected premise may be conducted as agreed upon by State Agricultural and Environmental officials. In general, burial setbacks include distance from a well, stream, dwelling, animal facilities, roadways and seasonable ground-water table. Burial for catastrophic events is the least preferred method for disposal and must be conducted with the highest biosecure methods available in order to prevent a communicable disease outbreak.

For dead animals of several hundred pounds, the pathogenic incinerator at the Delaware Department of Agriculture may be used. Capacity of this incinerator is 200-300 pounds per hour.



ANALYSIS AND TESTING:

21. Pre Side-dress Soil Nitrate Test (PSNT)

The PSNT is an in-season tool to help corn producers optimize their nitrogen (N) management. The idea of the PSNT is that a soil test, taken at the appropriate time, can provide information on the N status of a cornfield and allow the farmer to make necessary side-dress applications of N if necessary. Soil samples are collected when corn plants are 6-12 inches tall (ideally 10-12 inches) at the whorl. A "sample" is a collection of at least 15, 12-inch cores and should represent an area of similar soil type and management history not

to exceed 20 acres. Laboratory analysis of the soil sample will reveal the amounts of readily available nitrate-N (NO_3^-) in the soil, and tables provided by Delaware Cooperative Extension can then be used to calculate necessary additions of N.

22. Soil Test

Soil testing is an integral part of any nutrient management program because it is the only way to reliably assess the soil's contribution to plant nutrient requirements. Two of the most important elements of soil testing are determining the size of the area to be sampled and the number of samples to be collected. Samples should be collected to represent an area no larger than 20 acres, if possible. Each soil sample should consist of a minimum of 15 cores to minimize the impact of a single abnormal core. Samples should be collected from the appropriate depth, for most elements this depth is 6-8 inches. Soil testing involves not only the collection of samples, but also interpretation of laboratory results. University of Delaware Cooperative Extension has information available to aid operators in making management decisions based on soil test results for phosphorus (P), potassium (K), and many other nutrients. Although the Nutrient Management Law requires soil samples used with a nutrient management plan to be no older than three (3) years, more frequent testing will promote better nutrient management.

23. Phosphorus Site Index

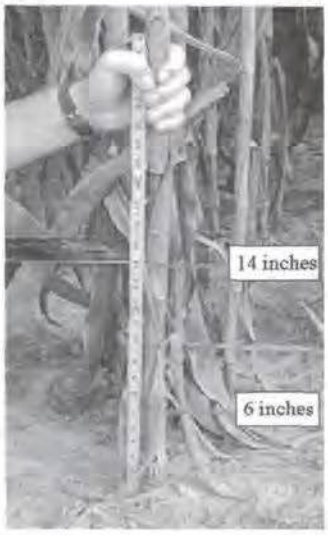
The Phosphorus Site Index (PSI) s a field-rating system designed to assess the relative risk of phosphorus movement from fields to ground or surface waters. The PSI assesses this risk by considering site-specific information such as soil types, landforms, and management practices. This information allows managers to focus Best Management Practices (BMPs) in areas of highest environment concern. Environmental concerns with phosphorus center around eutrophication, defined as "*an increase in the fertility status of natural waters that causes accelerated growth of algae or water plants*".

24. Phosphorus Saturation Ratio

The Phosphorus Saturation Ratio (PSR) is an indicator of the ability of the soil to retain phosphorus (P). This ability is measured by the ratio of extractable P to iron and aluminum available to tie up that P. As the ratio increases (soils become more saturated with P), the quantity of P that can be lost from the soil by erosion, surface runoff, and leaching increases. Research has shown that an increase in P loss occurs at PSR levels above approximately 20%. The PSR is included in soil test reports generated by the University of Delaware soil testing lab.

25. Tissue Analysis

Tissue testing is a valuable tool for in-season assessment of the availability of a number of essential plant elements. Such assessments are an important part of any nutrient management program. Some common elements determined in routine plant analysis include nitrogen (N), phosphorus (P), potassium (K), magnesium (Mg), and sulfur (S). As with soil testing, the collection, handling, and analysis of plant samples must be done properly to obtain useful results. University of Delaware Cooperative Extension has information available to aid operators in making management decisions based on tissue test results.



26. Stalk Nitrate Test on Corn

The end-of-season corn stalk nitrate test is a simple, inexpensive tool that can be used to assess the nitrogen (N) status of a corn crop at the end of the growing season. This test makes use of the fact that corn plants either remove N from, or accumulate N in, the lower stalk based on soil N availability. Studies over a wide range of conditions have found remarkably similar relationships between the amount of N found in the lower stalks late in the growing seasons and the likelihood that corn had been under or over-fertilized. Plant samples are collected after the corn is mature, usually 2 weeks after "black layering." University of Delaware Cooperative Extension has a publication; "End-of-Season Corn Stalk Nitrate Testing to Optimize Nitrogen Management" to aid operators in interpreting the results of their cornstalk tests.

27. Manure Testing

Manure testing is an integral part of any nutrient management program because animal manures vary widely in their nutrient composition. The four most common elements of manure testing are determining moisture, nitrogen (N), phosphorus (P) and potassium (K) content. There may also be situations where micronutrient or metal contents are critical. Delaware Cooperative Extension recommends that manure samples be collected for the smallest "unit" practical because of potential for enormous variability between different loads, manure types, etc. University of Delaware Cooperative Extension has information available to aid operators in collection and handling of manure samples. When sampling in the poultry house, take about 15 cores with a probe or shovel from random locations throughout the house making sure you sample the full depth of the litter and avoid the dirt floor. When sampling a stockpile, take about 10 scoops from the pile making sure that you penetrate as deep as possible into the pile. Do NOT include the wet, crusted outside layer of the pile in your sample. Place all 10 to 15 scoops or cores into a bucket and mix them thoroughly and then take a subsample and place in a one-gallon ziplock bag and seal. Leave space in the ziplock bag for gas expansion. Keep samples cool until delivery to the laboratory.

ADDITIONAL BMPs

28. Vegetable Waste (non permitted) Disposal

Vegetable production generates waste by-products that have the potential to contribute nutrients. These by-products should be managed in a manner that prevents nutrient contamination to surface and ground waters. Consideration should be given to the amount of raw waste generated, the nutrient content of the waste product, and recognition that nutrient loading depends on the way in which the waste is handled after harvest. Most vegetable waste, such as sweet corn fodder, cull ears and husks should be provided as a green manure recycled and applied to production fields. In the case of interim storage in any location other than a roofed and permanent structure, set back and time limits (14 days) associated with manure storage will also pertain to storing vegetable waste. Proper management of vegetable waste represents an efficient use of nutrients that are available for capture by future crops or cover crops.

29. Soil Structure Management

Soil "structure" refers to the way soil particles such as sand, silt, clay, and organic matter are arranged or "held together." Maintaining good soil structure is extremely important, and the single biggest threat to structure is compaction. Compaction is most commonly caused by animals or equipment and is essentially a "crushing" of the soil. This crushing eliminates pore spaces that are critical for water infiltration, water-holding capacity, and proper root development; each of which can severely limit yields. Compaction can be controlled by following some basic guidelines: avoiding wet fields, using rotational grazing, reduced tillage, deep tillage or ripping, and using certain crop rotations. (Refer to extension, etc. for more information.)

30. Manure Incorporation

Incorporation of surface-applied animal manures is an important practice for both economic and environmental reasons. Manure spread on the surface and not worked into the soil may lose most of the volatile nitrogen compounds as ammonia gas to the atmosphere. This lost nitrogen is not available for plant growth, and has been identified as a possible air quality contaminant contributing to acid rain. Whenever manure is spread, it should be incorporated within two days after spreading.

31. Daily Spreading of Animal Manures

Daily spreading of animal manures is generally not recommended. However, in situations where the operation MUST haul on a daily or very frequent basis, the following guidelines should be considered to minimize odors and environmental threats, and maximize the utilization of manure nutrients. Spreading during cooler, less-humid portions of the day, considering wind speed and direction in relation to neighboring farms or homes, and establishing buffer or "no-apply" zones near roads and residences, will help to minimize odor problems. Immediate incorporation will reduce odors, prevent physical movement of manure to waterways, and conserve valuable nitrogen.

The application method and timing is critical to proper nutrient management.

32. Timing of Manure Application

Applying manure at the correct time is important to ensure efficient and cost effective use of nutrients. Timely application of manures is also important to avoid adding nutrients to the waterways of the state. Applications of manure at times when crops will not be available to utilize the nutrients should be avoided. Application of manures should be done as close as possible to the time when the crop is seeded. Spreading manure on frozen ground, snow covered ground or saturated soil should be avoided.

Application of nutrients during favorable weather conditions can reduce the potential for nutrient losses from runoff and leaching. In order to allow for timely incorporation of manures, spreading of manure should not be done if a heavy rain is forecast for the following two days. The efficient use of nutrients means selecting the appropriate rate of each nutrient and applying each in a uniform and timely manner.

33. Nutrient Application Equipment Calibration and Adjustment

The efficient use of nutrients means selecting the appropriate rate of each nutrient and applying each in a uniform and timely manner. Application of nutrients during favorable weather conditions can reduce the potential for nutrient losses from runoff or leaching.

34. Calibrating Poultry Litter Spreaders

To be an effective source of crop nutrients, poultry litter should be applied evenly and at known rates. Dry litter is commonly applied with a spinner-type spreader. This equipment allows for both even application and a considerable range in application rates. Wet manure, such as that found in breeder or layer operations, is more commonly applied with "flail-type" spreaders. For all types of application equipment the basic procedure for calibrating is to collect litter on tarps that can be weighed in the field. When used properly, this method provides information on both the rate of application and the uniformity of coverage. An excellent step-by-step reference for calibrating manure spreaders can be found at *http://www.usr.sonet.net/usr/ke4rop/litter/index.htm*.

35. Precision Farming

Precision farming or site-specific management utilizes several technologies with a goal of increasing operating efficiencies such as boosting yields, reducing input costs, and improving profit margins. Technologies such as geographic information systems (GIS), automated machine guidance, in-field remote sensing, mobile computing, telecommunications, and advanced information processing when linked with the Global Positioning System (GPS) provide potential improvements to farm practices.

36. Residue Management

Residue Management is the management of the amount, orientation, and distribution of crop and other plant residue on the ground surface year round. Residue management improves water quality, while reducing soil erosion, increasing infiltration, increasing organic matter, improving soil structure, and reducing compaction and crusting.

37. No-till and Strip Till

NRCS Practice Code: 329A

The uniformly distributed crop residues are left undisturbed from harvest to planting. Planting or drilling is accomplished in a narrow seedbed or slot created by coulters, row cleaners, disc openers, in-row chisels or roto-tillers. Weed control is accomplished primarily with herbicides. Cultivation may be used for emergency weed control.

38. Mulch Tillage

NRCS Practice Code: 329B

The soil is disturbed prior to planting. Tillage tools such as chisels, field cultivators, discs, sweeps or blades are used. Weed control is accomplished with herbicides and/or cultivation.

39. Ridge Tillage

NRCS Practice Code: 329C

The crop residues are left undisturbed from harvest to planting. Planting is completed in a seed bed prepared on ridges with sweeps, disc openers, coulters, or row cleaners. Residue is left on the surface between ridges. Weed control is accomplished with herbicides and/or cultivation. Ridges are rebuilt during cultivation.

40. Seasonal

NRCS Practice Code: 344

The practice of managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during part of the year, while growing crops in a clean tilled seedbed reduces erosion and improves water quality.

41. Cover Crops

A cover crop is any crop planted in a field to provide protection to the soil during a period when row crops are not being grown. Cover crops reduce erosion, scavenge nitrogen that can be utilized by subsequent crops and minimize nitrate leaching into the ground water. Because manures contain nutrient compounds that break down slowly, cover crops should be utilized for all fields where manure has been applied. This period of utilization can be a relatively short time such as a couple of months between spring and fall crops, or a longer time such as six months between fall harvest and spring planting. Which type of cover crop is best depends on many factors including crop rotation and management goals. For example, is the goal simply to reduce erosion, scavenge nitrogen, put nitrogen back into the soil (i.e., legumes), or a combination of these and other objectives? During winter, recommended grass species include cereal rye, wheat, and barley although any winter-hardy annual species can be

used. Broadleaf species that can be used include winter rape and other leafy Brassica crops. Legume cover crops such as hairy vetch and annual or perennial clovers can be grown to reduce erosion. However, these species are not efficient for scavenging nitrogen from previous crops. During summer, grasses such a sudangrass, sorghum-sudangrass hybrids and others can be effective in protecting soil and trapping nutrients. Non-grasses such as buckwheat also can be effective cover crops. To maximize cover crop benefit, plant as early as possible, optimize soil-to-seed contact, and plant at the upper end of the suggested seeding rate range. The cover crop should be maintained as late into the spring as practical without running the risk that it will deplete sub- and topsoil moisture levels to the point of being injurious to the next crop.

42. Vetch Cover Crop

Hairy vetch is the most efficient nitrogen-fixing legume often fixing 50 to 100 or more pounds N/acre, dependant upon planting date and plant life. Nitrogen is released to the next crop rapidly.

43. Scarlet Clover Cover Crop

Scarlet clover, also referred to as crimson clover, is not as effective as hairy vetch at fixing N but will fix 60 to 90 or more lbs N/A plus increase availability to the next crop of other nutrients such as P and the micronutrients. Nitrogen release is also rapid.

44. Cereal Grain Cover Crop

Cereal grains planted solely as cover crops and other crops used as cover should be monitored closely in the spring to prevent excessive soil moisture loss in seasons with below average winter or spring rainfall. If adequate rainfall is received, time the destruction of the cover crop by tillage, herbicide, or other mechanical crop injury and destruction with the cover crop's growth stage and the subsequent crop's growth so nitrogen and other nutrients will be mobilized at a time suitable for crop uptake.

45. Legume Cover Crop

Many legume cover crops release nitrogen very rapidly after incorporation or destruction. To slow this release, include cereal rye, winter oats, or other high carbon winter crop when seeding the legume.

Legumes are appropriate cover crops for fixing atmospheric nitrogen for subsequent grass crops. Legumes can help make phosphorus and micronutrients more available to subsequent grain crops.

46. Conservation Buffer

Conservation buffers are areas or strips of land maintained in permanent vegetation to help improve water quality. The vegetation can be cool season grasses, warm season grasses, and/or trees and shrubs. Buffers can trap sediments, take up nutrients, provide valuable wildlife habitat, and provide shading of the stream. The size of the buffer depends on the intended use of the buffer. The minimum width should be 10 feet for limited sediment entrapment with a preferred minimum width of 24 feet, while the minimum width for a wildlife buffer is 35 feet.

47. Riparian Forest Buffer

NRCS Practice Code: 391

Riparian forest buffers are an area of trees and/or shrubs located adjacent to and up gradient from water bodies.

48. Vegetative Filter Strips

NRCS Practice Code: 393

A filter strip is a strip or area of herbaceous vegetation situated between cropland, grazing land or disturbed land (including forestland), and environmentally sensitive areas.

49. Water Control Structure

NRCS Practice Code: 587

A water control structure is a device that conveys water, controls the direction or rate of flow or maintains a desired water surface elevation. These are typically used to control the depth and discharge of water in open channels, ponds, and wetlands. They can also be used for water quality control, such as sediment reduction and temperature regulation.

50. Drainage Ditch Maintenance

Well managed and adequately vegetated drainage ditches are important to ensure the productivity of agricultural land as well as their potential for environmental impact. The unintended direct application of manure or nutrients into or in proximity to drainage ditches can greatly affect Stormwater discharges of those nutrients into Waters of the State. Nutrient applications should not be conducted along ditches, ditch side-slopes, maintenance right of ways, tilled land or any other land immediately adjacent to the ditch. The potential to discharge nutrient-bearing stormwater into ditches must be prevented by employing protective nutrient application setbacks or incorporation into cultivated land. Other BMPs such as vegetative filter strips, planted riparian buffers, constructed wetlands that collect runoff, are important in filtering nutrient runoff before it enters ditches and other water bodies.

Filters such as vegetative buffers are effective along ditch edges and within the ditch and can be planted with approved warm and cool season grasses or lay fallow. Vegetative areas should be maintained through the usage of mowing according to a conservation plan and or a "weed wiper bar" system to control woody plants while preserving the vegetative ground cover. This ground cover is ideal for nutrient uptake and promotes a diverse wildlife habitat. One sided ditch maintenance is common and provides shade for the ditch, which decreases water temperature and provides water quality improvements as well as valuable wildlife habitat. Dipping out a channel to remove accumulated sediment should be considered when appropriate. Strategically placing sediment traps within channels can prolong the over-all dip-out frequency. Your County Conservation District may provide programs to assist in managing drainage ditches for effective drainage and water quality.

51. Strategically Placed Wetland

NRCS Practice Code: 656

A strategically placed wetland is a constructed shallow water ecosystem designed to simulate natural wetlands, and placed in a location that will receive runoff from farmsteads and crop fields. It is designed to control storm water runoff and is effective in utilizing excess nitrogen. This practice is not intended to treat animal waste or runoff from feedlots. Strategically placed wetlands shall be located outside the limits of wetlands of any classification. Components may include inlet screening device to prevent debris from entering the wetland; embankments; overflow structure to maintain proper water level, and control flow from the wetland; and wetland plants. The wetland must be sized to contain the design storm and bypass larger events, while providing the needed detention time for treatment of the target contaminant. All federal, state, and local laws, rules and regulations governing the discharge to waters of the state must be complied with.

52. Strategically Placed Sediment Removal

NRCS Practice Code: 638 (Water and Sediment Control Basin)

Strategically placed sediment removal is a short embankment or a combination ridge and channel typically constructed across the slope and minor watercourses. They are used to trap and collect sediment, reduce on-site erosion, reduce the sediment content of runoff, reduce peak rate of flow at down-slope locations, reduce flooding and reduce gully erosion.

53. Grass Waterways

NRCS Practice Code: 412

A grassed waterway is a natural or constructed swale, shaped or graded and established in suitable vegetation for the safe conveyance of runoff. Grassed waterways are used to transport surface runoff from terraces, diversions, or natural concentrations without causing erosion or flooding and thereby protecting or improving water quality. The size and shape of the grassed waterway will be based on the anticipated flow rate and the slope of the waterway and the type and height of the vegetation.

54. General Erosion Controls

NRCS Practice Codes: 350, 362. 393, 561, 600

Erosion controls are a combination of practices that are constructed or installed with the purpose of preventing or minimizing the loss of soil from a farmstead and cropland. Components may include sediment basins (350); diversions (362), filter strips (393), heavy use area protection (361), and terraces (600). Diversions are used to divert clean runoff away from areas that are susceptible to erosion. Terraces are used to shorten the slope length in a crop field. Filter strips are grassed areas placed across the slope below cropland or farmsteads for the purpose of catching and trapping soil particles in the runoff as it passes through. Heavy use area protection consists of covering the soil in an area that gets heavy use, such as farmsteads and farm lanes with a surface that will protect the underlying soil from erosion. Typically gravel, concrete or asphalt is used. Sediment basins are used to trap sediment once erosion has occurred, and prevent its transport offsite.

55. Field Windbreak for Erosion and Odor Control

NRCS Practice Code: 394

A strip of trees or shrubs established adjacent to a building, feedlot, or field to reduce erosion, conserve energy, control snow deposition, prevent wind damage, provide shelter for livestock, improve water quality, reduce noise pollution, provide wildlife habitat, and improve landscaping.

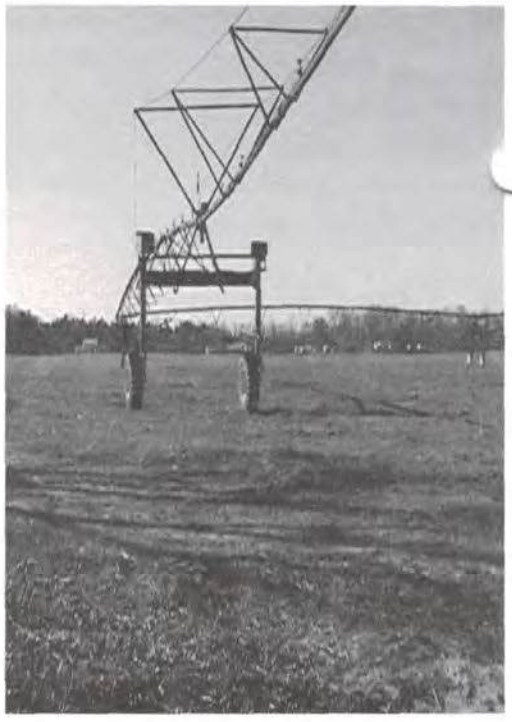
The major benefits of trees around the perimeters of buildings include increasing production efficiency, demonstrating proactive environmental stewardship and fostering good neighbor relations. Properly established windbreaks can reduce heating and cooling costs, minimize structural damages from wind and prevent air-borne diseases from entering and exiting your farm. Planting trees around farms also offers environmental benefits and represents good stewardship. Another important aspect of trees is their ability to filter odor and noise, thus decreasing the likelihood of odor and noise-related complaints from neighbors.

56. Irrigation Systems and Education

Irrigation can be a great benefit to nutrient management planning. It helps normalize yields during periods of dry weather. When a consistent supply of water is provided, plants can utilize the nutrients that are available.

This in turn reduces the amount of residual nutrients and lessens the likelihood of leaching into the ground water.

Your local conservation district, the state nutrient management office, and Delaware Cooperative Extension provide additional nutrient management information.



SECTION 5: Additional Documentation

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

The following documents are located in this section:

- Water Conveyance Map Around Production Area
- Poultry Litter Estimation Worksheet
- Online References
- Maryland Department of the Environment MAFO/CAFO Permit
- Field by Field Nutrient Management Record
- Manure Import Form
- Manure Export Form
- Monthly Animal & Mortality Count
- Inspection/Monitoring Records
- Nutrient Land Application Form
- Weekly Storage Form
- Weekly Wastewater Form
- Manure Litter Storage Form
- Manure Application Form
- Manure Litter Transfer Form
- Daily Waterline Form

UNIVERSITY OF MARYLAND EXTENSION

POULTRY LITTER QUANTITY ESTIMATE

Name: **Bill Calloway** Tract / Farm: Date:

Houses included:

		Bird type:	**Broiler**
		Average Bird Market Weight (lbs):	**7**
A.	Years between total cleanouts:	Yr. next total cleanout:	**2028**
		- Yr. last total cleanout:	**2018**
		= Years in cleanout cycle:	10
B.	Total # of birds per flock (for all houses on this cleanout cycle):		**91,400**
C.	Flocks per year		**5**
D.	Number of flocks per cleanout cycle (A x C):		50
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: *		**1.4192**
G.	Tons cake/crust produced per flock (B x E/1000):		18
H.	Tons cake/crust produced per cycle (G x D)		914
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):		6,486
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):		5,572
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):		557
L.	Tons of litter + cake/crust produced per year (I/A)		649

* 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)
2019	0	557	**10**	56	5	91		56
2020	593	1,150	**40**	460	5	91		460
2021	781	1,339	**40**	535	5	91		535
2022	895	1,452	**40**	581	5	91		581
2023	962	1,520	**40**	608	5	91		608
2024	1,003	1,560	**40**	624	5	91		624
2025	1,028	1,585	**40**	634	5	91		634
2026	1,042	1,599	**40**	640	5	91		640
2027	1,051	1,608	**40**	643	5	91		643
2028	1,056	1,614	**100**	1,614	5	91		1,614
				6,394	50	914	0	6,394

*** 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.

UNIVERSITY OF MARYLAND EXTENSION

POULTRY LITTER QUANTITY ESTIMATE

Name **eddie calloway** Tract / Farm: Date

Houses included:

	Bird type:	**Broiler**
	Average Bird Market Weight (lbs):	**7**
A	Years between total cleanouts: Yr. next total cleanout:	**2028**
	- Yr. last total cleanout:	**2018**
	= Years in cleanout cycle:	10
B.	Total # of birds per flock (for all houses on this cleanout cycle):	**65,400**
C.	Flocks per year	**5**
D.	Number of flocks per cleanout cycle (A x C):	50
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: *	**1.4192**
G.	Tons cake/crust produced per flock (B x E/1000):	13
H.	Tons cake/crust produced per cycle (G x D)	654
I.	Tons litter + cake/crust produced per cycle (B x D x F/1000):	4,641
J.	Tons of litter produced per cycle (less cakeout/crustout) (I - H):	3,987
K.	Tons of litter produced per year (less cakeout/crustout) (J/A):	399
L.	Tons of litter + cake/crust produced per year (I/A)	464

* 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)
2019	0	399	**10**	40	5	65		40
2020	424	823	**40**	329	5	65		329
2021	559	958	**40**	383	5	65		383
2022	640	1,039	**40**	416	5	65		416
2023	689	1,087	**40**	435	5	65		435
2024	718	1,116	**40**	447	5	65		447
2025	735	1,134	**40**	454	5	65		454
2026	746	1,144	**40**	458	5	65		458
2027	752	1,151	**40**	460	5	65		460
2028	756	1,155	**100**	1,155	5	65		1,155
				4,575	50	654	0	4,575

*** 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.

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

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

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

Nutrient 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***	

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

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

Weekly Storage and Containment Structure Inspections Log Sheet

Facility Name: _____ NPDES Permit No.: _____

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

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

Storage or Containment Structure: _____

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

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

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

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

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

Weekly Wastewater Facilities Inspections Log Sheet

Facility Name: _____ NPDES Permit No.: _____

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

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

List the items that need to be inspected below:

_____ _____
_____ _____
_____ _____
_____ _____

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

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

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**
The William Calloway Farm, PWSS	40'x60'		12,000 cf	
The Edward Calloway Farm, PWSS	40'x130'		26,000 cf	

Manure Application Equipment Inspection and Calibration Record

Facility Name: _____ NPDES Permit No.: _____

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

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

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

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)

Maryland
Department of
the Environment

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

Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

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		
2		
3		
4		
5		
6		
7		
8		
9		
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February, 20____		
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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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